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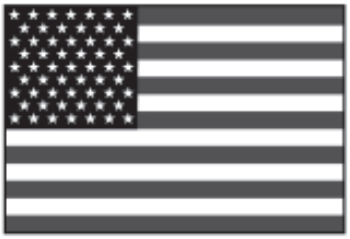
AVIATION MAINTENANCE ALERTS



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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

BEECH

Beech; Model F-33A; Bonanza; Aileron Control System Defect; ATA 2710

In the process of a scheduled inspection, a technician discovered an aileron control cable was severely damaged.

The cable (P/N 35-524314-22) was worn and frayed to the point of imminent failure. The damage was located adjacent to a pulley assembly. The pulley bearing was "frozen" and would not allow the pulley to rotate during cable movement.

The submitter recommended the manufacturer consider using pulleys with "sealed" type bearings for all flight control installations. The flight control cables and pulleys should be given very close attention at every opportunity.

Part total time-2,552 hours.

Beech; Model G-35; Bonanza; Magneto Failure; ATA 7414

The pilot reported that the engine right magneto failed during a preflight runup check.

A technician investigated the magneto failure and discovered the impulse coupling spring was broken. He could not determine why the spring failed; however, he noticed the "P-lead" was spliced to the ground wire. The spliced connection was very poor and loose causing "intermittent" failure and operation of the magneto (Slick Model number 6379).

The submitter speculated the previous installer, for undetermined reasons, spliced the "P-lead" to the ground wire. The previous installer could not be identified. Although the magneto had accumulated only a few hours, the submitter speculated it had been removed for maintenance just prior to this occurrence. It would have been far better if the connection between the "P-lead" and ground had been made solid. Then the magneto would not have functioned at all!

Part total time-18 hours.

Beech; Model 58; Baron; Landing Gear System Failure; ATA 3230

During a landing approach, the pilot selected the landing gear to the "down" position; however, the landing gear did not respond. With great difficulty, he was able to lower the gear using the emergency-extension system and made a safe landing.

A technician investigated the problem and discovered the emergency-extension handle was badly deformed. Apparently, while attempting to lower the gear, the pilot applied sufficient force to deform the handle. When the technician placed the aircraft on jacks and tried to duplicate the discrepancy, he discovered the gear actuation motor was defective. He could only operate the emergency-extension handle when the gear motor was removed.

Investigating further, the technician found the gear motor commutator and winding insulation were melted together due to excessive heat. This damage caused internal friction sufficient to impede the emergency extension of the gear. In addition, he replaced the gearbox worm drive gear because the "slot" was damaged during the use of the emergency-extension system.

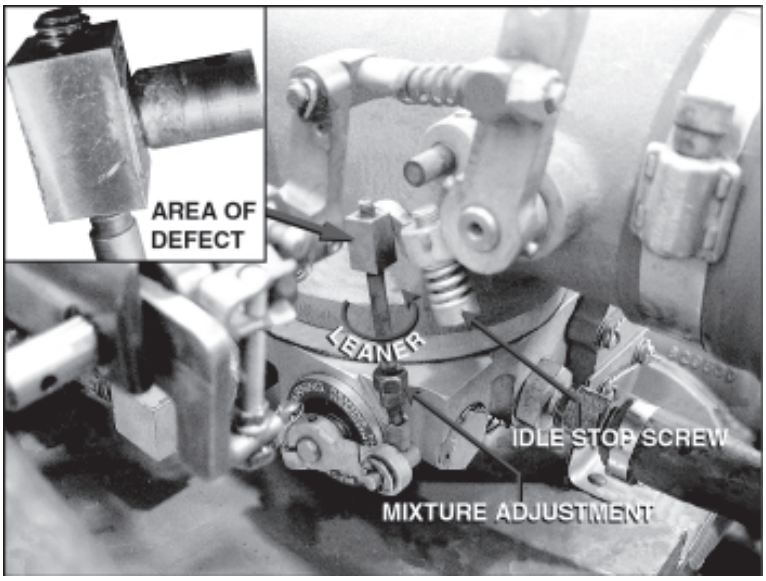
The manufacturer recommends replacing the gear motor each 2,000 hours of operation; however, the submitter urged a more aggressive inspection and time change schedule.

Part total time-1,774 hours.

Beech; Model 58P; Baron; Engine Control Failure; ATA 7603

After returning from a flight, the pilot reported the left engine throttle was binding and difficult to move.

An investigation by a maintenance technician revealed severe galling on the mixture-control adjustment rod. The galling occurred where the rod attaches to the "throttle and control assembly" (P/N 640791A5) lever. (Refer to the illustration.) There was a significant amount of metal transfer, which prevented full movement of the throttle control.



The submitter stated it "appeared the throttle lever was made from a different type of material."
He recommended that technicians closely examine the mixture-control rod assembly during scheduled inspections.

Part total time-100 hours.

Beech; Model E90; King Air; Flight Control Defect; ATA 5523

During a scheduled inspection, a technician discovered the elevator trim tab was cracked.

The crack was located in the upper inboard aft corner of the right elevator trim tab skin (P/N 50-610017-22) and protruded forward and aft from a countersunk rivet. The crack traveled approximately .35 inch in each direction from the rivet hole. Due to the extent of the damage, the technician replaced the trim tab (P/N 50-610017-36) skin.

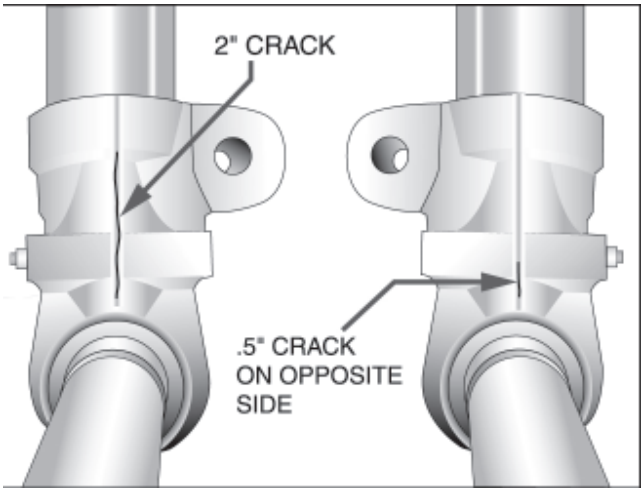
The submitter gave no cause for this defect, although it may have been related to the high number of operating hours.

Part total time-6,558 hours.

Beech; Model 100; King Air; Main Landing Gear Defect; ATA 3213

During a scheduled inspection, a technician removed and disassembled both main landing gear assemblies for nondestructive inspection (NDI).

The NDI revealed a crack indication on both sides of one main gear piston/axle assembly (P/N 50-810318). One of the crack indications was approximately 2 inches long and the other was approximately .5 inch long. (Refer to the illustration.)



The submitter recommended that all concerned technicians give special attention to this area at every opportunity.

Part total time-1,546 hours.

Beech; Model 300; King Air; Electrical System Short Circuit; ATA 3310

After completing a special inspection, the technician reinstalled the right circuit breaker lighted panel and prepared for an operational test of the "lighted edge panel." During the system test, he applied electrical power to the aircraft and noticed the "#2 Avionics Hot Bus," 25-amp circuit breaker (CB-92) "tripped open" when the "#2 Avionics Master" switch on position was selected.

While troubleshooting this problem, the technician discovered a panel screw shank penetrated the wire (P65A10) insulation. The wire was improperly routed directly behind a panel screw nut plate. Contact between the screw (P/N MS35214-28) shank and the wire was not severe; however, repeated removal and reinstallation of the panel screws eventually wore through the wire insulation.

The submitter recommended that technicians reroute the wire to provide adequate clearance between the screw shank and the wire insulation.

Part total time-3,210 hours.

Beech; Model 1900C; Airliner; Engine Fuel Leak; ATA 2820

While preparing for a flight, the pilot noticed fuel leaking from the inboard side of the left engine and asked maintenance personnel to investigate.

A technician discovered the fuel was coming from the "low pressure" fuel pump valve cover drain. He replaced the fuel pump (Lear Seigler/Romec P/N 114-389042-5, RG37060A) and approved the aircraft for return to service.

The technician disassembled the pump and found the diaphragm (P/N RA5326), in the "pressure adjusting valve," was punctured. Investigating further, he discovered the diaphragm control plate (P/N RA531), which contacts the diaphragm, did not conform to the manufacturer's design drawing. The finish of the outer circumference of the plate had sharp edges, which wore through the rubber diaphragm.

The submitter stated this is a continual problem with this particular fuel pump. It is recommended that technicians be aware of this problem and report all discrepancies via FAA Form 8010-4, Malfunction or Defect Report (M or D). All M or D reports are entered into the FAA, Service Difficulty Reporting (SDR) Program data base and are made available to the public on the Internet.

The Internet address is: <http://afs600.faa.gov>. When the page opens, select "AFS-620, Data Search, SDR Info." When the next page opens, select "Query SDR Data" and design your search criteria. (Note: Do not use dash(es) when using part numbers.) Using this system, you will find there are 16 additional reports concerning the fuel pump described in this article.

Part time since overhaul-1,365 hours.

Beech; Model 1900C; Airliner; Aileron Yoke; ATA 2710

While performing a scheduled inspection, a technician found a cracked aileron yoke.

The right aileron yoke, (P/N 118-521024-9) was cracked on one side. The crack was adjacent to the taper pinhole and appeared to follow the grain of the metal. This component was inspected at least once within the previous 2,000 hours and no damage was found at that time.

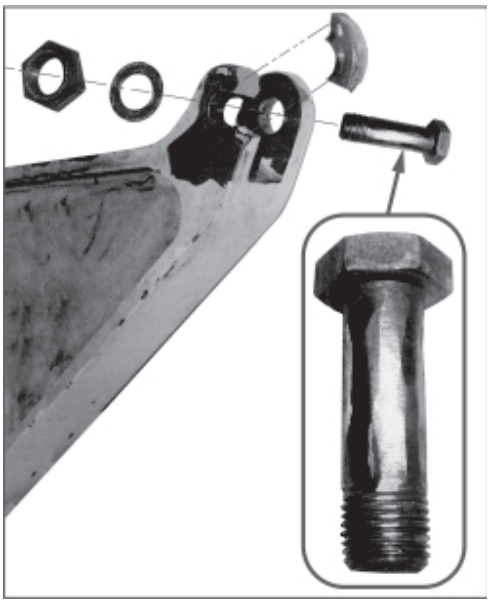
This is the third similar failure that the submitter has identified in recent months.

Part total time- 30,175 hours.

Beech; Model 1900C; Airliner; Landing Gear Arm Defective; ATA 3233

During landing gear removal, a technician found a main landing gear arm defective.

The arm (P/N 114-810026-1), which attaches to hydraulic actuator, had a broken ear. (Refer to the illustration.)



The submitter believes the damage occurred when an incorrect bolt was used during the original installation.

Part total time not reported.

CESSNA

Cessna; Model 150; Carburetor Defect; ATA 7322

During a training flight, the instructor demonstrated the engine leaning process. He pulled the mixture control out until engine roughness occurred and attempted, without success, to enrich the mixture. This resulted in an emergency landing due to loss of engine power.

A technician inspected the carburetor (Precision MA-3SPA) and found that the mixture control lever moved without movement of the mixture control metering valve (P/N 242-514). It appeared the metering valve was seized. While disassembling the carburetor, he found it was very difficult to separate the bowl from the throttle body due to an extremely tight fit of the valve assembly. Also, he found score marks on the valve assembly.

The submitter speculated the failure might have been caused by improper fit of the metering valve components when they were previously installed.

Part total time-42 hours.

Cessna; Model 172R; Skyhawk; Fuel Leak; ATA 2810

While conducting a scheduled inspection, a technician noticed a fuel stain on the underbelly of the aircraft.

The fuel stain was in the area just below the fuel selector valve, and the technician suspected it was the leak source. He removed the cabin floor and enough upholstery to gain access to the area. He removed the fuel selector valve and the fuel reservoir tank (P/N 0516009-18), but there was no problem with the fuel selector valve. He purged the reservoir tank and performed a pressure test that revealed a crack approximately .75 inch long in a welded seam of the reservoir tank.

The submitter speculated this crack was the result of a manufacturing defect.

Part total time-313 hours.

Cessna; Model 172R; Skyhawk; Alternator Failures; ATA 2421

After experiencing several alternator failures in a fleet of like aircraft, a technician submitted seven Malfunction or Defect reports.

The technician believes there is a systemic problem with the alternators (Aeroelectric P/N 9910591-11). He stated, “The alternators usually operate between 100 and 600 hours before they fail.” It seems that, for an undetermined reason, the resistance in the field circuit increases to the “mega-ohm” range causing alternator failure.

Some of the seven reported failures occurred on the same aircraft, but all the involved alternators had different serial numbers. The warranty prohibits disassembly of the alternator and prevented the submitter from determining the exact cause of failure.

If you experience similar alternator failures, please report the occurrence by describing the failure on FAA Form 8010-4, Malfunction or Defect Report (M or D). You will find a copy of the M or D form on the last page of this publication. These reports are entered into the FAA Service Difficulty Program data base, which is available on the Internet.

Part total times-596, 547, 530, 470, 280, 258, and 116 hours.

Cessna; Model 177RG; Cardinal; Nose Landing Gear Defect; ATA 3230

During an annual inspection, technicians conducted a landing gear retraction test.

During the test, the nose gear would not fully retract. The technician discovered the bellcrank (P/N 2043031-12) was “over center,” causing the roller (P/N 2043033-2) to miss the uplock hook and restricting the up travel of the nose gear. Also, the retract spring (P/N 1414116-2) was stretched and did not provide adequate tension. He replaced the spring and the nose gear retracted properly during another gear retraction test.

The submitter stated this defect allowed the nose gear to remain partially out of the gear well, and the gear doors remained open approximately 30 degrees. This defect could lead to failure of the nose gear doors and possible jamming of the nose gear.

Part total time-2,867 hours.

Cessna; Model 182; Skylane; Smoke in the Cockpit; ATA 2460

During a flight over mountainous terrain, the pilot turned on the instrument lights; and a large quantity of smoke filled the cockpit. He turned off the electrical system master switch and landed at the nearest available airport.

A technician investigated the pilot's report and found that the instrument light control was defective. The rheostat assembly (P/N 0413126-7) windings and the contact arm were severely heat damaged by electrical arcing and burning. Also, the rheostat case was burned through. It is interesting to note that the instrument light circuit breaker did not open and was later determined to be defective.

The rheostat/switch is mounted to a plastic trim panel. The mounting hole was "egg-shaped," which compromised security and prevented the button from popping out. The submitter recommended that technicians remove the switchback to check for signs of arcing and condition during scheduled inspections.

Part total time-3,026 hours.

Cessna; Model 402C; Businessliner; Landing Gear Failure; ATA 3213

During a landing, the left main landing gear lower strut and wheel assembly separated from the aircraft.

Investigating the incident, a technician determined that the upper and lower torque links separated. The bolt that secures the torque links was missing. He speculated that the cotter pin (P/N MS24665-153) failed, allowing the nut to loosen and separate from the bolt due to operational vibration. The bolt then vibrated out of the torque links.

The submitter recommended that technicians closely inspect the torque link cotter pins for security, condition, and wear at every opportunity.

Part total time not reported.

Cessna; Model 421C; Golden Eagle; Oxygen System Leak; ATA 3610

After returning from a flight, the pilot reported the oxygen system was depleted.

A technician inspected the oxygen system, located in the nose baggage area, and found that a supply line (P/N 5100109-37) had chafed against the "ram air duct support coil." The chafing action wore a hole in the oxygen line causing depletion of the oxygen supply.

The submitter stated this was the third such occurrence he was involved with. He stated that while inspecting the line on the ground, it appears there is adequate clearance. However, he believes the ram air duct and the oxygen line contact each other during flight.

Part total time not reported.

Cessna; Model 650 Citation; In-Flight Loss of Hydraulic Pressure and Quantity; ATA 2912

After a safe emergency landing, the pilot reported losing normal hydraulic system pressure and quantity. He also reported the aircraft was approximately 1,100 pounds overweight, but the landing was "soft."

Investigating the incident, a technician gained access to the aileron bellcrank area and discovered the compartment was "full of hydraulic fluid." He cleaned the area, serviced the hydraulic reservoir, and pressurized the system. He found hydraulic fluid leaking from the aileron boost actuator filter housing area. He removed the filter assembly and found that the fluid was leaking past the "O-ring" seal (P/N MS28778-4). The "O-ring" seal had a "nick" large enough to allow hydraulic fluid to escape. After installing a new "O-ring" seal, the hydraulic system functioned properly. He did not offer a cause for this defect.

The submitter performed an "overweight-landing" inspection, found no defects, and approved the aircraft for return to service.

Part total time-388 hours.

Cessna; Model 650; Citation; Suspect Fuel System Seals; ATA 2820

During a scheduled inspection, a technician discovered fuel seeping from a sump drain.

The technician replaced the fuel sump drain "O-ring" seal to correct the problem. He stated it appears the "O-ring" seal (P/N MS29513-010) was "dry rotted and had several cracks." He also questioned whether the "O-ring" material was compatible with exposure to aviation fuel.

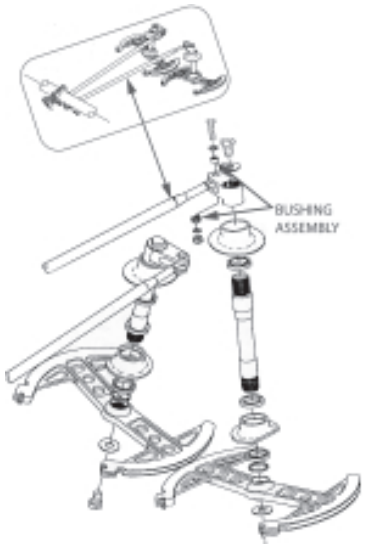
The FAA, Service Difficulty Reporting Program data base contains three additional similar reports.

Part total time not reported.

Cessna; Model 750; Citation; Difficult Movement of the Elevator; ATA 2730

After returning from a flight, the crew reported the "elevator felt abnormally stiff."

The technician discovered the elevator push-pull tube on the copilot's side was binding during movement. He disassembled the tube rod-end and discovered that the two-part bushing (P/N 6760312-17 and P/N 6760312-25) was "frozen" to the bolt. (Refer to the illustration.) After he replaced the bushing assembly, the elevator system functioned normally.



The submitter suggested it would be wise to inspect this area closely at every opportunity.

Part total time-3,161 hours.

MAULE

Maule; Model M-5-235C; Lunar Rocket; Flight Control System Failure; ATA 2720

While landing, with the wind directly down the runway, the pilot lost directional control of the aircraft. This event culminated in a "ground loop" and caused damage to the aircraft.

The technician discovered the left rudder cable (P/N 3177-29) had failed at the aft "Nicopress" sleeve. The loss of rudder control caused the loss of directional control and the "ground loop." He examined the rudder cable and did not find any evidence of corrosion. The swaged attachment sleeve was previously inspected in accordance with Airworthiness Directive (AD) 2000-09-06.

The submitter recommended that technicians rigorously adhere to the requirements of AD 2000-09-06 as well as other flight control terminals.

Part total time-1,660 hours.

MOONEY

Mooney; Model M20C; Ranger; Corrosion of Structural Members; ATA 5741

During an annual inspection, the inspector discovered severe structural corrosion.

The corrosion was evidenced by exfoliation of the wing carry-through spar. The most severe exfoliation of corrosion products was on the top of the spar cap.

The submitter stated this aircraft was stored outside and was not operated very often. He gave no cause or cure for this defect.

Part total time not reported.

Mooney; Model M20K; Flight Control System Defect; ATA 2731

During a flight, the pilot adjusted the elevator trim and experienced a severe uncommanded nosedown attitude. He was able to gain control of the aircraft and landed safely.

A technician discovered the elevator trim switch (P/N 200-1902-02) had "stuck" in the nosedown position. After he removed and replaced the trim switch, the system operated properly during a functional test.

Part total time not reported.

PIPER

Piper; Model PA 23-250; Aztec; Right Main Landing Gear Hydraulic Line Failure; ATA 3200

During an approach for landing, the landing gear failed to extend either normally or when the pilot used the hand pump.

The pilot extended the landing gear by using the emergency blow-down extension system. The nose and right main gear did not extend; however, the left main gear extended. The aircraft sustained substantial damage.

A technician inspected the aircraft and discovered the right main landing gear down line in the nacelle had failed at the sleeve/flare area.

Piper; Models PA-24 and PA-30; Comanche and Twin Comanche; Update and Correction of Previous Article; ATA 5520

This article was printed on page 9 of the October 2002, edition of this publication. Since that time, additional information has been received.

The previous article stated: "The submitter recommended the FAA consider issuing an Airworthiness Directive to address this problem." It was brought to our attention that the FAA previously published an Airworthiness Directive (AD). The AD number is 74-13-03, and it covers the subject of elevator security.

If additional information is required, please refer to AD 74-13-03.

We regret any inconvenience this omission may have caused. We recommend that all technicians research the AD records to ensure compliance.

Piper; Model PA 24-250; Malibu Mirage; Wing Spar Attachment Fasteners Broken; ATA 5740

During an annual inspection, a technician discovered the rivets were sheared and missing from the right wing rear spar attachment assembly (P/N 23663-00).

This assembly is attached to the center section carry-through under the baggage compartment floor. While inspecting the spar attachment assembly, the technician discovered the stringer (P/N 20600-47), which attaches to the assembly, was cracked and buckled. A review of the aircraft records indicated the bulkhead assembly (P/N 20614-11) was previously replaced. This stringer is attached to the right front wing attach point.

The submitter stated the probable causes for this problem would be old unreported damage to the outboard right wing area or by pushing the aircraft very hard at the wingtip. Both of these damaged areas are difficult to inspect. The baggage floor and the front upholstery side panels must be removed to access this area.

Aircraft total time-5,371 hours.

Piper; Model PA 31-350; Chieftain; Poor Engine Performance; ATA 7314

During a postflight inspection, the technician conducted an engine operational test. He found that the right engine would not operate without the aid of the fuel boost pump.

After securing the aircraft, the technician checked the right engine-driven fuel pump (Crane P/N RG9080J4A/M). He discovered the pump shaft rotated, but demonstrated roughness and resistance indicating severe internal wear and/or failure.

The submitter did not give any further circumstances surrounding this failure. However, the FAA Service Difficulty Reporting Program data base contains 10 additional reports concerning failure of this part number engine-driven fuel pump. The additional pump failures occurred at the following operating times: 65 hours, 424 hours, 510 hours, 921 hours, "0" hours, "0" hours, 565 hours, 17 hours, 115 hours, and 1,748 hours.

Part total time-677 hours.

Piper; Model PA 32-300; Cherokee Six; Vacuum System Failure; ATA 3700

During a scheduled inspection, a technician discovered the vacuum pump would not operate. The pilot/owner stated there were no indications of the failed vacuum pump during flight.

Investigating further, the technician found the aircraft was equipped with a "Precise Flight" standby vacuum system. The standby system uses an automatic flapper/shuttle valve (P/N SVS0133) that delivers vacuum pressure from the engine when the primary system fails. The standby vacuum system is activated by a "push-pull" cable. There was no indication in the cockpit to warn the pilot that the primary vacuum system was not functioning.

The standby vacuum system was installed in accordance with Supplemental Type Certificate (STC) SA2167NM. Airworthiness Directive (AD) 99-24-10 requires initial and recurring inspections of the standby vacuum system and incorporates Precise Flight service information SVS III. The junction of the shuttle valve flapper arm and the valve seat was worn far beyond the limits given in SVS III. The technician found that the shuttle valve was in a condition for impending failure and stated that complete failure would result in loss of all vacuum system pressure.

Evidently, the defective shuttle valve allowed vacuum from the standby system to pressurize the primary system. The submitter gave no explanation of why the cockpit instrument panel indicator light failed to illuminate.

Part total time-1,013 hours.

Piper; Model PA 38-112; Tomahawk; Landing Gear Failure; ATA 3211

During a landing, the right main landing gear separated from the aircraft.

A technician discovered the forward gear clamp bolt (P/N AN6H-14A/401-462) failed. The bolt failure allowed the gear to rotate out of alignment with the direction of the aircraft and exerted excessive stress on the gear attachment fittings. The inboard gear attachment bolt was literally pulled apart (tension failure).

The submitter suggested that technicians check the forward clamp and bolt for condition and serviceability during scheduled inspections and maintenance.

Part total time-619 hours.

Piper; Model PA 44-180; Seminole; Engine Air Induction System Failure; ATA 7160

While conducting a scheduled inspection, a technician discovered the left engine carburetor heat airbox was cracked.

The carburetor heat airbox (P/N 86245-834) crack was located at the hot air inlet and extended almost all the way around the tube. This defect placed the airbox in imminent danger of complete separation and jeopardized safe operation of the aircraft.

The submitter speculated this defect was caused by excessive stress applied to the part due to "poor design and possibly weak welds at both the cold and hot air tubes." This was the third occurrence of the same problem on this aircraft. The first two airboxes failed in the same manner after 198 and 299 hours of operation. The FAA Service Difficulty Program data base contains three additional failure reports related to this part.

The submitter recommended that technicians pay special attention to the airbox assembly at every opportunity.

Part total time-323 hours.

Piper; Model PA 46-350P; Malibu Mirage; Engine Contamination; ATA 7160

During a scheduled inspection, a technician discovered internal metal contamination and damage to the turbocharger.

While searching for the source of the metal particles, the technician discovered the metal protective screen, which encases the engine air-induction system air filter (P/N 561-020) element, had come apart. The metal particles from the air filter screen had also migrated into the engine oil system contaminating the oil filter and the air-induction system.

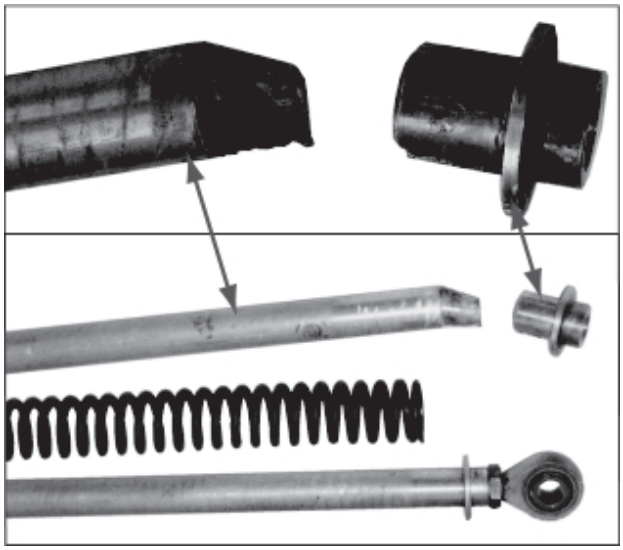
The submitter is working with the engine manufacturer for teardown and inspection procedures. Due to the relatively low number of service hours on the air filter, he speculated that a defective lot was manufactured; therefore, there may be other defective filters in service or in the supply system. He cautioned all concerned personnel to closely inspect each air filter prior to installation.

Part total time-100 hours.

Piper; Model PA 46-350P; Malibu Mirage; Nose Landing Gear Component Failure; ATA 3230

During a Supplemental Type Certificate (STC) installation, a technician discovered the nose landing gear emergency-extension rod was defective.

The extension rod (P/N 83699-003) contains a spring used to assist emergency extension of the nose gear. One end was broken where the rod-end fitting attaches. The submitter evaluated the evidence and concluded the rod-end fitting separated from the tube because of an "inferior weld" attachment. (Refer to the illustration.) Due to the spring loading of the rod assembly, failure of either end fitting causes "violent separation from the aircraft."



Failure of the rod assembly may prevent extension of the nose gear. The submitter suggested that the manufacturer consider redesigning this part to be more structurally substantial for the intended purpose.

Part failed after 71 cycles.

Piper; Model PA 60-601; Aerostar; In-Flight Door Separation; ATA 5210

The pilot reported the upper section of the cabin door separated from the aircraft during flight. Just prior to losing the door (P/N 250002-505), he heard a "creaking" sound. He landed the aircraft safely without further damage.

A technician inspected the aircraft and could not determine why the door separated. He stated there are 35 other incident reports in the FAA data base on the Internet concerning door failures. He expressed his concern there may be a systemic problem with the door latching assembly.

Part total time-4,590 hours.

Piper; Model PA 60-700; Aerostar 700P; Instrument Air Manifold Valve Failure; ATA 3700

During a scheduled inspection, a technician found the manifold valve instrument air outlet port blocked.

The technician inspected the system and discovered the flapper valve hinge material flexed until it cracked. Failure of the hinge allowed the flapper valve to separate and lodge in the air outlet port.

The submitter stated this failure could lead to inoperative instruments, incorrect readings, and unsafe flight conditions. He encouraged technicians to check the manifold for this condition at every opportunity.

Part total time-2,102 hours.

HELICOPTERS

BELL

Bell; OH-58C (206); Kiowa; Pylon Support Defect; ATA 5415

While conducting a scheduled inspection, a technician discovered a defective pylon-support strap.

This helicopter used four pylon-support straps. The left rear pylon-support strap (P/N 206-032-200-27) is riveted to the underside of the upper cabin roof beam at the aft corner. The strap was cracked approximately 2.25 inches in length in a bend radius. The submitter stated the left rear support strap is "the most critically loaded" of the four.

The same submitter sent a similar report on another like helicopter. He encouraged technicians to inspect the pylon-support straps closely at every opportunity.

Part total time-8,810 hours.

Bell; Model 407; Bearing Failure; ATA 7921

During a scheduled inspection, a technician discovered "black grease" coming from both oil cooler blower bearings.

The bearings (P/N 407-340-339-101) were the "new style" bearings called for in Bell Alert Service Bulletin (ASB) 407-01-44. This seems to be a common occurrence as indicated by the FAA Service Difficulty Program data base, which contains 39 oil cooler blower bearing failure reports. Several of the 39 entries reported multiple bearing failures for the same part number, and all of the failures were reported in the past 2 years.

Bell has issued several modifications designed to cure this problem, and all technicians are urged to consult the appropriate technical data. The technician recommended that the manufacturer reduce the service time (life limit) from 100 hours to 25 hours.

Part total time-243 hours.

Bell; Model 407; RPM Switch Failure; ATA 6240

After returning from a flight, the pilot reported that the rotor RPM annunciator light illuminated. The light remained on even though the rotor RPM was in the normal range.

A technician investigated the report and discovered the rotor RPM sensor switch (P/N 407-375-021-103) was defective. He did not provide a cause for the switch failure.

Part total time-1,165 hours.

EUROCOPTER

Eurocopter; Model AS-350B2; Ecureuil; Electrical System Failure; ATA 2435

The pilot made a safe emergency landing and reported the electrical system failed.

While investigating this report, a technician removed the starter/generator (P/N 150SG122Q) and discovered that one set of brushes had failed. The failed brushes led to a gradual drop of electrical output, which the battery compensated until it was depleted.

The submitter recommended that technician conduct more rigorous inspections of the starter/generator brushes during scheduled inspections.

Part total time since overhaul-441 hours.

POWERPLANTS AND PROPELLERS

TELEDYNE CONTINENTAL

Teledyne Continental; Model GTSIO-520-H; Internal Failure; ATA 8550

After an in-flight failure of the right engine, the pilot landed the aircraft safely and summoned maintenance personnel. This engine was installed on a Cessna, Model 421B aircraft.

The technician found the number 5 cylinder-connecting rod had separated and penetrated the top of the crankcase. He speculated this failure was caused by "oil starvation at the number 5 rod journal." He also believes the engine was previously "field overhauled."

Engine total time-2,636 hours. Total time since overhaul-803 hours.

ACCESSORIES

JANAERO DEVICES COMBUSTION HEATER

While servicing the heater on a Piper Navajo PA-31-350, the technician discovered the fuel regulator was leaking.

The heater was installed in May 2002, and had a total of 42 hours of operation. Airworthiness Directive (AD) 2001-17-13 and JanAero Service Bulletin No. A-107 were accomplished when the unit was installed.

The submitter stated they operate three like aircraft and many of this new type JanAero fuel regulators have started leaking with less than 100 hours of time in service.

Part total time as previously stated.

PARKER HANNIFIN (AIRBORNE) VACUUM PUMP INSTALLATIONS

The following article was submitted by the FAA, Aircraft Certification Office (ACO), ACE-118W, located in Wichita, Kansas. *(The article is printed as it was received.)*

The FAA has been advised that some of the vacuum pumps and possibly pump drive coupling kits provided by Parker Hannifin (Airborne), produced under a Parts Manufacture Approval, may have incorporated a cork gasket. The cork gasket is not compatible with some pump installations on certain engine installations.

One airframe manufacturer, Cessna Aircraft Company, has issued a specific Service Newsletter (SNL00-8), which applies to installation of incorrect vacuum pump cork gasket. However, the suspect cork gasket may have been provided and/or installed on other makes and models of aircraft when either the vacuum pump and/or the pump drive coupling were serviced or replaced.

Aircraft have been known to operate for several hundred hours after installation of the suspect cork gasket before problems arise. The problems may be manifest by engine oil leakage between the vacuum pump drive pad and could become severe enough to cause engine failure. Also, it is possible that torque values on the attachment fasteners may decrease over time as the cork gasket material shrinks and is compressed.

All operators and technicians are encouraged to review the maintenance records of aircraft to determine if a vacuum pump event has occurred in the past, which may have included installation of a cork gasket. The Parker Hannifin (Airborne) vacuum pump and/or the pump drive coupling kits were provided by between January 1998 and July of 2002. If any of these components were replaced during this time period, the owners, operators and/or technicians should verify that the correct gaskets were installed.

Additional information may be available from Parker Hannifin Airborne Division or possibly other airframe manufacturers. Parts suppliers should also examine their current inventory to determine if any suspect vacuum pumps or drive kits have cork gaskets.

AIR NOTES

IDENTIFYING PART NUMBERS

Recently a reader made us aware of some interesting information concerning identifying part numbers used in the articles in this publication.

Typically, we provide part numbers in the various articles to identify particular parts of concern. The reader pointed out that, on occasion, the part numbers do not correspond to the identification of specific components. This anomaly occurs because, where possible, we use identifying part numbers given by the aircraft manufacturer and these may differ from the “vendor” identifying numbers.

In many cases, the aircraft manufacturer procures a particular part from two or more vendors and identifies them all by their part number. Even so, all of the different vendor parts must conform to the specifications given by the aircraft manufacturer.

When possible, we will list the manufacturer of defective parts; however, it will still be necessary to consult the manufacturer's technical data and/or contact the aircraft manufacturer to ascertain the vendor of a particular component.

A TRIBUTE TO THE FORGOTTEN MECHANIC

Through the history of world aviation many names have come to the fore....
Great deeds of the past in our memory will last,
as they're joined by more and more....

When man first started his labor in his quest to conquer the sky he was designer, mechanic, and pilot, and he built a machine that would fly....

But somehow the order got twisted, and then in the public's eye the only man that could be seen was the man who knew how to fly....

The pilot was everyone's hero, he was brave, he was bold, he was grand, as he stood by his battered old biplane with his goggles and helmet in hand....

To be sure, these pilots all earned it, to fly you have to have guts....

And they blazed their names in the hall of fame on wings with bailing wire struts....

But for each of these flying heroes there were thousands of little renown, and these were the men who worked on the planes but kept their feet on the ground....

We all know the name of Lindbergh, and we've read of his flight to fame....

But think, if you can, of his maintenance man,
can you remember his name?

And think of our wartime heroes, Gabreski,
Jabara, and Scott....

Can you tell me the names of their crew chiefs?
A thousand to one you cannot....

Now pilots are highly trained people, and wings are not easily won....

But without the work of the maintenance man
our pilots would march with a gun....

So when you see mighty aircraft as they mark their way through the air, the grease-stained man with the wrench in his hand is the man who put them there....

The anonymous author of this composition must surely have had an appreciation and respect for those of us past and present who endeavor to promote aviation safety to the highest possible level. We endure the environmental extremes of the flight line and are content to allow those who are pilots to

reap the glory of the public eye. We are content to remain in the background with the calm assurance that we have given our all in the pursuit of safety in aviation. We swell with pride as we watch the product of our labor rise gracefully from the runway and embrace a pristine sky.

The greatest and most valued recognition we can hope to receive comes from our peers and from within. The Aviation Awards Program, started by the FAA, has become one of the most coveted forms of recognition for maintenance personnel. Its rewards are not easily attained, and only those individuals with uncompromising and long-suffering moral and ethical values are found worthy. This program stresses education, training, and superior performance as well as the other attributes mentioned here, to praise those worthy of its tests. Our most valued assets are the tools of our trade, our reputation, integrity, and the respect of our customers who put their lives in our hands.

With the many technological and sociological advances in aviation over the years, many of the ideas put forth in this poem are no longer valid. For example, "bailing wire" is very much frowned upon as wing strut and hinge pin material. For the most part, maintenance personnel no longer fit the stereotype of a "grease-stained man." The stereotype has been distorted and propagated by the entertainment media. The "grease-stained man" with a rag hanging from his pocket, a cap with a "turned-up bill," and a "less than intelligent look on his face," is purely a fictional character conjured to provide contrast and further embellish the flyer. Also, not all maintenance men are men; there are many women who have earned a position among our ranks and have made significant contributions to aviation maintenance safety.

Through the evolution of aviation maintenance, the requirements of brawn has been replaced by an ever-expanding requirement for brain power. With the complex nature of today's aeronautical products, has come maintenance people who can analyze, forecast, and troubleshoot problems by use of the computer. (Usually, we don't get "grease stained" from this activity.) The ever-changing demands of maintaining today's aircraft present a new challenge each day. These challenges are met with an eager enthusiasm to learn something new and to "put things right." We approach each new challenge with a proud and confident demeanor, which seems to say, "you can't break anything that I can't fix!"

SUBSCRIPTIONS

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In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing information. Since GPO controls price increases, contact GPO for current subscription information.

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

http://av-info.faa.gov/isdr/

When the page opens, select "M or D Submission Form" and, when complete, use the "Add Service Difficulty Report" button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY REPORTING PROGRAM

The objective of the Service Difficulty Reporting (SDR) Program is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products fleet wide. The SDR program is an exchange of information and a method of communication between the FAA and the aviation community concerning inservice problems.

A report is filed whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. In addition, if a system, component, or part of an aircraft, powerplant, propeller, or appliance has a flaw or imperfection which impairs, or which may impair its future function, it is considered defective and should be reported under the program.

These reports are known by a variety of names: Service Difficulty Reports (SDR), Malfunction and Defect Reports (M or D) and Maintenance Difficulty Reports (MDR).

The consolidation, collation and analysis of the data, and the rapid dissemination of trends, problems and alert information to the appropriate segments of the aviation community and FAA effectively and economically provides a method to ensure future aviation safety.

The FAA analyzes SDR data for safety implications and reviews the data to identify possible trends that may not be apparent regionally or to individual operators. As a result of this review, the FAA may disseminate safety information to a particular section of the aviation community. The FAA also may adopt new regulations or issue airworthiness directives (AD's) to address a specific problem.

The primary source of SDR's are certificate holders operating under Parts 121, 125, 135, 145 of the Federal Aviation Regulations, and the general aviation community which voluntarily submit records. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft and maintenance surveillance as well as accident and incident investigations.

The SDR data base contains records dating back to 1974. Reports may be submitted on the Internet through an active data entry form or on hard copy. The electronic data entry form is in the AFS-600 Aviation Information web site under the heading SDR Main Menu. The URL is: <http://av-info.faa.gov>

A public search/query tool is also available on this same web site. This tool has provisions for printing reports or downloading data.

At the current time we are receiving approximately 45,000 records per year.

Point of contact is:
John Jackson
Service Difficulty Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125

Telephone: (405) 954-6486
9-AMC-SDR-ProgMgr@mmacmail.jccbi.gov

ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to: U.S. Government Printing Office, **ATTN: SSOM, ALERT-2G**, 710 N. Capital Street N. W., Washington, DC 20402

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**. Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

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You can access current and back issues of this publication from the internet at: http://afs600.faa.gov

When the page opens, select "AFS-640" and then "Alerts" from the drop-down menu. The monthly issues of the Alerts are available back to July 1996, with the most recent edition appearing first.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between September 28, 2002, and October 30, 2002, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION

Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFT MAKE	ENG MAKE	COMP MAKE	PART NAME	PART CONDITION	DIFF-DATE	T TIME
ACFT MODEL	ENG MODEL	COMP MODEL	PART NUMBER	PART LOCATION	OPER CTRL NO.	TSO
REMARKS						
		ARTEX	BATTERY PACK	CRACKED	10/24/2002	
		ELT1104	4520130	ELT	2002FA0001213	

ON ANNUAL INSPECTION DISCOVERS BATTERY PACK ON ELT1104 CRACKED AND BATTERY ACID LEAK. FOUND ON TWO SEPARATE UNITS, SAME LOCATION AND SAME FAILURE. BATTERY PACKS PURCHASED IN OCT-2000 DUE FOR REPLACEMENT NEXT MONTH. DAMAGE WAS NOT PRESENT AT PREVIOUS ANNUAL IN OCT-2001.

	CONT	COLLAR	DISTORTED	10/14/2002	
	IO520D	626739	ENGINE	2002FA0001184	

IN ASSEMBLING A NEW STANDARD GOVERNOR OIL TRANSFER COLLAR TO THE CRANKSHAFT IT WAS FOUND TO BIND ON THE JOURNAL. PRIOR TO DISASSEMBLING THE COLLAR HALVES THE INSIDE DIAMETER WAS NOTED TO BE SMOOTH AND COLLAR TO JOURNAL CLEARANCE WITHIN NEW LIMITS. ONCE THE COLLAR HAD BEEN DISASSEMBLED AND REASSEMBLED A STEP OF APPROXIMATELY .001 INCH WAS FOUND AT THE PARTING SURFACES. INSTALLING THE COLLAR ON THE CRANKSHAFT AND TORQUING IT IN PLACE CAUSED IT TO BIND IN AN INTERFERENCE FIT. IT APPEARS THE TWO HALVES ARE UNDER SOME TORSIONAL STRESS WHICH IS RELIEVED UPON TAKING THEM APART. THIS IS NOW THE FOURTH CONSECUTIVE COLLAR ORDERED FROM OUR AVIALL DISTRIBUTOR TO EXHIBIT THESE CHARACTERISTICS. CALLS HAVE BEEN MADE TO TELE

	CONT	CYLINDER	CRACKED	10/15/2002	
	IO520D	655469A7	ENGINE	2002FA0001196	

A CRACKED CYLINDER HEAD FIN WAS DISCOVERED ON NR 1 CYLINDER FOLLOWING THE ACCEPTANCE RUN AFTER THE ENGINE HAD BEEN OVERHAULED. AN ATTEMPT TO DRESS IT OUT INDICATED THAT THE CRACK EXTENDED ON TO THE BASE OF THE FIN AND POSSIBLY CYLINDER HEAD. CYLINDER WAS REMOVED AND REPLACED UNDER FACTORY WARRANTY.

AMRGEN		CONNECTOR	ARCED	10/10/2002	
AA5B		2055612	GPS SYSTEM	YHLR200200001	

AIRCRAFT OWNER STATED THAT UNIT QUIT WORKING IN FLIGHT. REMOVED GPSCOMM FROM TRAY AND FOUND THAT PINS 21 & 25 HAD ARCED. FOUND THAT GPSCOMM WAS NOT SEATED PROPERLY IN TRAY AT TIME OF ORIGINAL INSTALLATION BY GULF COAST AVIONICS. REPLACED CONNECTOR & DAMAGED PINS 21 & 25. THIS COULD HAVE BEEN PREVENTED IF THE ORIGINAL INSTALLER (GULF COAST AVIONICS) HAD VERIFIED THAT THE UNIT WAS SEATED PROPERLY & CORRECTLY IN THE TRAY.

AMTR	LYC	BLADE	CRACKED	08/26/2002	37
GLASTAR	O320*	72R3BD	PROPELLER	2002FA0001139	

PROPELLER BLADE SHANK CRACKED RADIALLY AT THE JUNCTION OF THE SHANK AND THE BLADE. SLIGHT FORE AND AFT BLADE MOVEMENT DETECTABLE. ALL 3 BLADES CRACKED. INSTALLATION LOOKED PROPER WITH CORRECT TORQUE ON HUB AT BLADE ATTACH POINT.

AMTR CONT FILTER MISSING 09/10/2002
RV8 IO360* ENGINE AUS20021072
(AUS) ENGINE SUMP FITTED WITH NO SUCTION FILTER IN THE OIL SYSTEM. APIECE OF LOCKWIRE APPROXIMATELY 15.875MM (0.625IN) LONG WAS FOUND IN AN OIL GALLERY. DAMAGE TO OIL PUMP, CRANKSHAFT REAR BEARING AND THRUST BEARING SURFACES. ALL PISTON SKIRTS SEVERELY SCORED.
AMTR CONT FILTER UNAPPROVED 09/10/2002
RV8 IO360* ENGINE AUS20021073
(AUS) UNAPPROVED OIL FILTER INSTALLED. PERSONNEL/MAINTENANCE ERROR. UNAPPROVED PART.
AMTR LYC HARTZL BLADE DAMAGED 09/20/2002 3455
STEENSKYBOLT IO360A1A F7666A2 PROPELLER 2002FA0001113 135
PROP WAS REMOVED WITH 135.0 HOURS SINCE OVERHAUL. REASON FOR REMOVAL WAS TO EVALUATE PROP FOR POSSIBLE TRADE IN. DURING PRELIMINARY INSPECTION OF BLADE WIDTH AND THICKNESS FOR VALUE ASSESSMENT, BOTH BLADES WERE FOUND TO BE BELOW MFG MINIMUM SPECS AT 34 INCH STATION. ONE BLADE MEASURED 3.656 INCHES. VISUAL CONDITION OF PROPELLER BLADES ARE NEARLY AS IF THEY WERE JUST OUT OF OVERHAUL, MEANING NO FILING HAS BEEN DONE ON LEADING EDGES OF BLADES AND THERE IS VERY LITTLE IF ANY PITTING FROM STONE DAMAGE. PAINT ALSO LOOKS ORIGINAL FROM OVERHAUL AND HAS NOT BEEN REPAINTED.
BBAVIA LYC CABLE BROKEN 09/11/2002
7KCAB IO320E2A SAR21534 DOWN ELEV CABLE 2002FA0001128
THE DOWN ELEVATOR CONTROL CABLE FAILED AT THE REAR PULLEY BELOW BATTERY BOX. THE PULLEY HAD STOPPED TURNING THUS CUTTING OR WEARING CONTROL CABLE TO A CONDITION IT WHERE IT FAILED WITH HARD FORWARD STICK. METER SHOWED .5 AND GS.
BBAVIA LYC LEG ASSY BROKEN 04/07/2002
8GCBC O360* 71461 MLG 2002FA0001177
LEFT MAIN GEAR LEG BROKE AT ATTACHING CLAMP ON LANDING. EVIDENCE OF CHAFING AT FORWARD LOWER SURFACE WHERE UNDETECTED FLAW IS NOTED. NO INJURIES TO PILOT, OUTBOARD RIB BENT, PROP STRIKE.
BBAVIA LYC SPAR CRACKED 08/27/2002
8GCBC O360C2E 71493 WING CA020913009
(CAN) CRACK FOUND IN THE FUEL CELL STIFFENER SPAR ON THE WING.
BBAVIA LYC FUEL TANK CRACKED 09/09/2002
8GCBC O360C2E 714931L CENTER CA021007005
(CAN) CRACK IN LT INBOARD FUEL TANK UPPER SURFACE AT OUTBOARD END OF CENTER PREFORMED STIFFENER. - IN ALUMINUM SPAR WINGS.
BEECH PWA LINKAGE BROKEN 07/16/2002 14027
100BEECH PT6A28 508201892 NLG STEERING CA020827004 14027
(CAN) THE STEERING LINK WAS FOUND BROKEN 3/4 OF AN INCH FROM WERE IT ENTERS THE DUST BOOT. THE STEERING LINK WAS REPLACED AND THERE HAS BEEN NO FURTHER OCCURRENCES
BEECH WASHER MISSING 10/11/2002 1700
200BEECH 100951X063XE MLG FAI001 1700
FOLLOWING TAKEOFF, GEAR RETRACTION FAILED, WITH GEAR STUCK IN-TRANSIT. A NOISE WAS HEARD FROM THE LEFT SIDE OF THE AIRCRAFT AT THE TIME OF FAILURE. EMERGENCY EXTENSION EFFORTS PRODUCED NO RESULTS, AND THE EMERGENCY EXTENSION HANDLE BECAME SEIZED. CONTACT WITH MAINTENANCE PERSONNEL CAUSED THE COPILOT TO OPEN THE CABIN FLOOR OVER THE GEAR DRIVE MECHANISM, AND REVEALED THAT THE LANDING GEAR MOTOR CONTROLLER CIRCUIT BREAKER WAS OPEN. BREAKER WAS RESET, AND THE LANDING GEAR EXTENDED NORMALLY. PRIOR TO LANDING, A FLYOVER OF THE MAINTENANCE PERSONNEL REVEALED THE LEFT MAIN GEAR WHEELS TO BE TURNED APPROXIMATELY 20 DEGREES RIGHT. LANDING WAS COMPLETED WITH NO INCIDENT. INVESTIGATION REVEALED THAT THE LEFT MAIN GEAR TOR

BEECH PWA BRACKET CRACKED 08/30/2002 400
200BEECH PT6* E697711D PROP BLADE CUFF 2002FA0001135
THE BRACKETS (PN E6977-11D) THAT SUPPORT THE QUICK DISCONNECT PLUG ASSEMBLY FOR THE PROP DEICE BOOT DUG INTO THE PROPELLER BACKPLATE. THIS WAS DONE TO VARYING DEGREES AT EACH BLADE POSITION ON THE BACKPLATE. THIS OCCURRED ON BOTH PROPS ALTHOUGH IT WAS WORSE ON THE RIGHT PROP. THIS IS THE PROP REFERENCED ON THE FORM. THE HITTING OF THE BACKPLATE BY THE DEICE BRACKET ONLY OCCURS WHEN THE PROP GOES TO MAX REVERSE. THE PROPS ARE NOW AT THE PROP SHOP FOR INVESTIGATION.
BEECH PWA ROTOR BROKEN 08/15/2002
200BEECH PT6A42 RFS1030 BRAKE AUS20021075
(AUS) RH INNER BRAKE ROTOR BROKEN INTO THREE PIECES.
BEECH PWA RIVET ERODED 08/19/2002 2505
400A JT15D5 TURBINE WHEEL 2002FA0001195
HIGH TURBINE BLADE RETAINING RIVETS AND COLLARS APPEAR TO BE SUFFERING EROSION, CAUSING RIVET TAILS TO FALL BELOW THE .050 INCH PROTRUSION AS OUTLINED IN MFG MM. IF LEFT IN SERVICE THIS SITUATION COULD CAUSE THE HIGH TURBINE BLADES TO SHIFT AND/OR FAIL, CAUSING ENGINE FAILURE. ALL 71 RIVETS AND 71 COLLARS ARE BEING REPLACED WITH NEW.
BEECH LYC BENDIX POINTS MELTED 09/19/2002
65B80 IO720* 10382585 MAGNETO 2002FA0001123
MELTING OF NYLON WHERE IT CONTACTS POINT ARM DURING OPENING AND CLOSING OF POINTS DURING OPERATION. INFERIOR NYLON USED, NOT RESISTANT TO WEAR OR HEAT.
BEECH CONT SPAR CRACKED 09/18/2002 3500
95C55 IO520* LT ELEVATOR 2002FA0001140
REMOVED LT ELEVATOR AND FOUND REAR SPAR CRACKED AT TRIM TAB ACTUATOR. TECH SUPPORT AND CONSENSUS IS TO REPLACE REAR SPAR.
BEECH PWA TERMINAL LOOSE 09/30/2002
99 PT6A20 CIRCUIT BREAKER CA021001009
(CAN) ON DESCENT INTO FORT SMITH FROM FORT CHIPEWYAN, THE CREW NOTICED AN ELECTRICAL SMELL, FOLLOWED SHORTLY BY SMOKE. ALL ELECTRICAL POWER WAS TURNED OFF. ALL NON ESSENTIAL FUNCTIONS WERE TURNED OFF THEN POWER WAS TURNED BACK ON. THE SMELL REAPPEARED. POWER WAS RESTORED LONG ENOUGH TO LOWER GEAR AND MAKE RADIO CALLS THEN TURNED OFF FOR LANDING. ON INSPECTION, THE WIRE ATTACHED TO THE POWER SIDE OF THE WING DEICE LIGHT CIRCUIT BREAKER WAS LOOSE .THE BAD CONNECTION WAS CAUSING THE WIRE TO HEAT UP NEAR THE TERMINAL.
BEECH RIVET MISSING 08/20/2002 10
A200 10161000013 TRIM TAB 2002FA0001175
ELEVATOR TRIM TABS ON AIRCRAFT WERE INSPECTED FOR RIVETS. FOUND LT ELEVATOR TRIM TAB THAT WAS INSTALLED 10 HOURS PRIOR, TO BE MISSING ALL RIVETS. THE SKINS WERE BONDED BUT RIVETS WERE NEVER INSTALLED. THE TRIM TAB HAD BEEN SITTING ON OUR SHELF FOR 2 YEARS BEFORE INSTALLATION. THOUGH INSPECTION OF TRIM TABS BEFORE INSTALLATION TO VERIFY RIVET INSTALLATION.

BEECH CONT PIN BROKEN 09/25/2002
A36 IO520BB B4460 PROPELLER 2002FA0001190 750
ACTUATING PIN BROKE AT BASE OF THREADS DUE TO IMPROPERLY DRILLED HOLE TO ACCEPT PIN. SHALLOW DEPTH NOT TAPPED TO THE BOTTOM OF THE HOLE.
BEECH CONT ARTEX BATTERY CRACKED 09/06/2002
A36 IO550* 4520130 ELT 2002FA0001145
IN COMPLETING 14 CFR ON THIS ELT, IT WAS NOTED THAT MOUNTING TRY HAS SOME KIND OF WHITE RESIDUE IN IT, INSPECTION OF THE ELT FOUND A CRACK IN THE BATTERY HALF OF THRU ELT CASE. OPENED UP ELT AND INSPECTION OF BATTERY ASSEMBLY SOUND THAT ONE OF THE CELLS HAD RUPTURED.
BEECH CONT CHANNEL CRACKED 09/24/2002 5697
A36 IO550B 3634031015 FUSELAGE 2002FA0001171
DURING ROUTINE INSPECTION AFT RADIO (AVIONICS) SHELF ATTACH BRACKET WAS FOUND CRACKED AT AFT END IN BEND RADIUS. BRACKET IS LOCATED ON RIGHT SIDE BETWEEN BS 179.00 TO 207.00. VIBRATION AND TIME IN SERVICE IS PROBABLE CAUSE. AVIONICS SHELF ASSEMBLY ALSO FOUND CRACKED IN BEND RADIUS.
BEECH CONT FITTING DAMAGED 09/19/2002
A45 O470* 351150581 RT WING 2002FA0001146
REMOVED WING LOWER ATTACH FITTING COVERS IN PREPARATION FOR EDDY-CURRENT INSPECTION IAW T34 REPORT. BEFORE BEGINNING EDDY-CURRENT INSPECTION NOTED DEEP TOOL MARKS/GOUGES IN RIGHT WING LOWER AFT BATHTUB FITTING INTERIOR. ALSO NOTED SIMILAR MARKS IN LEFT WING LOWER FORWARD FITTING DAMAGE APPEARS TO HAVE BEEN CAUSED BY ROUGH, IMPROPER WING ATTACH BOLT REMOVAL/ INSTALLATION TECHNIQUES DURING PREVIOUS MAINTENANCE. NO FURTHER ACTION TAKEN.
BEECH BOLT CRACKED 09/20/2002 2716
B100 8178610 WING 2002FA0001194
LEFT AFT UPPER WINGBOLT CRACK FOUND WHERE SHAFT CONNECTS TO BOLT HEAD. WINGBOLT INSPECTION CARRIED OUT IAW AD. BOLT WAS INSPECTED 1 YEAR/ 324 HOURS, PRIOR. BOLT, TT 2716.5 HOURS, 2544 A/C CYCLES. INSTALLED APRIL 1991.
BEECH SKIN CRACKED 08/15/2002 595
B200 RUDDER 2002FA0001136
FOUND A 3.5 INCH CRACK APPROXIMATELY 6 INCHES DOWN AND .0200 INCH ON THE RIGHT SIDE TRAILING EDGE OF THE RUDDER.
BEECH PWA PPG WINDSHIELD OVERHEATED 09/25/2002
B200 PT6A42 10138402517 10138402517 COCKPIT CA021001006
(CAN) SHORTED AND OVERHEAT CONDITION ON LT WINDSHIELD GROUND TERMINAL CAUSING A HEAVY SMELL OF BURNED PLEXIGLASS TYPE OF ODOR. PILOTS SWITCHED OFF LT WINDSHIELD ANTI-ICE AND SMOLDERING SUBSIDED.
BEECH PWA BEECH STRAP CRACKED 10/17/2002 7917
B200C PT6A42 50420013944 FRAME BN001
UPON REMOVAL OF AIRCRAFT INTERIOR TO TROUBLESHOOT WIRING PROBLEMS, TWO STRAP ASSEMBLIES ON THE RT SIDE OF THE FUSELAGE AT F.S. 227.0 AND 246.0, BUTTOCK LINE 119.0 WERE FOUND COMPLETELY CRACKED THROUGH. THE STRAP ASSEMBLY AT F.S. 246.0. THESE AREAS WOULD NOT NORMALLY BE INSPECTED UNTIL 10,000 CYCLES. RAYTHEON HAS CONFIRMED ONE OTHER SIMILAR INCIDENT ON THE BL MODEL AIRCRAFT EQUIPPED WITH A CARGO DOOR. THERE IS NO EVIDENCE OF PREVIOUS DAMAGE OR ABNORMAL OPERATION IN THE AIRCRAFT LOGBOOK.
BEECH LYC LOCK OVERTORQUED 10/03/2002
C23 O360A4K 61156 CRANKSHAFT 2002FA0001191
LOCKPLATE FOR CRANKSHAFT GEAR RETAINING BOLT NOT SUFFICIENTLY BENT ALLOWING CRANKSHAFT GEAR BOLT TO LOOSEN. CRANKSHAFT GEAR DOWEL PIN SHEARED. RECOMMENDATION TO PREVENT RECURRENCE: CRANKSHAFT GEAR BOLT TORQUE SHOULD BE VERIFIED AT 204IN/LBS AND LOCKPLATE INSPECTED TO ENSURE PROPER LOCKING OF THE PLATE AGAINST THE BOLT HEAD.
BEECH PWA SWITCH FAILED 08/29/2002
C90 PT6A28 A4503M95 MLG CA021002015
(CAN) THE HANDLE WOULD NOT WORK IN THE DOWN POSITION UNLESS THE HANDLE WAS TAPPED. A NEWLY OVERHAULED LANDING GEAR CONTROL WAS INSTALLED. IT WORKED FOR 229.5 HOURS AND 216 CYCLES BEFORE FAILING THE SAME WAY. AFTER REMOVING THE HANDLE THE DOWN SWITCH WAS NOT WORKING. THIS IS THE THIRD CONTROL WITH THE SAME PROBLEM IN 10 MONTHS 450 HOUR OF FLYING.
BEECH PWA TUBE CRACKED 09/24/2002
C90A PT6A21 9091010017 INTAKE ANTI ICE CA020927004
(CAN) ENGINE ANTI-ICE INTAKE TUBES REPLACED AS PER BEECH SB 71-3142, WERE FOUND CRACKED (NOT SEPARATED) AT FIRST INSPECTION AFTER SB COMPLIANCE.
BEECH PWA BEECH TUBE CRACKED 09/24/2002
C90A PT6A21 9091009913 9091009913 INTAKE ANTI ICE CA021004006
(CAN) ENGINE ANTI-ICE (INTAKE) TUBES REPLACED AS PER SB 71-3142 (BEECH) - NEW TUBES FOUND CRACKED (NOT SEPARATED) AT FIRST INSPECTION AFTER SB COMPLIANCE. TUBE L/H P/N 90-910099-13 R/H P/N 90-910100-17
BEECH PWA WHEEL CRACKED 09/04/2002 375
C90A PT6A6 300257 MLG 2002FA0001169
FOUND WHEEL HALF CRACKED FROM BOLT HOLE CAUSING LEAK DOWN OF TIRE. THERE WERE NO SIGNS OF OVER TORQUE OR EXCESSIVE WEAR. TT 375 HOURS. CASTING OR MANUFACTURE DEFECT. PART WAS SENT TO MFG FOR EVALUATION.
BEECH CONT COLLAR CRACKED 09/25/2002
G35 E2258 83410 PROPELLER 2002FA0001189
GUIDE COLLAR CRACKED DUE TO VIBRATION FROM PROPELLER. BOTH BLADES SLIPPED IN CLAMP CREATING A SPLIT IN ANGLES. THIS CAUSED VIBRATION.
BEECH CONT BRACKET CORRODED 09/11/2002
V35A IO520B 35361133 LANDING GEAR POS AUS20021032
(AUS) RH MAIN LANDING GEAR STRUT SQUAT SWITCH ATTACHMENT BRACKET CORRODED THROUGH.
BELL LYC BELL BULKHEAD CRACKED 09/02/2002
204B T5313B 204030749017 T/R FLT CNTRL AT CA020918010
(CAN) T/R FLIGHT CONTROL BELLCRANK SUPPORT P/N 204-001-814-001 ATTACHES TO BULKHEAD P/N 204-030-749-017. THE BULKHEAD IS REINFORCED BY LOWER ANGLE P/N 204-030-749-013 AND UPPER ANGLE P/N 204-030-749-015. WE SUSPECT THAT THE LOWER ANGLE P/N 204-030-749-013 CRACKED PROBABLY DUE TO CORROSION (NOT VERIFIED YE T). THIS ALLOWED THE SUPPORT TO MOVE AND EVENTUALLY CRACKED THE BULKHEAD. WHEN THE BULKHEAD CRACKED, IT ALLOWED FOR THE T/R CHAIN PITCH CHANGE MECHANISM TO BECOME DISENGAGED DUE TO EXCESSIVE MOVEMENT OF THE BELLCRANK SUPPORT. THE PITCH CHANGE MECHANISM RE-ENGAGED BUT WAS NOW COMPLETELY OUT OF RIG RESULTING IN LOSS OF T/R AUTHORITY. THE PART THAT HAS FAILED IS NOT UNDER EXTREME LOADS AND REMAINS A MYSTERY AS TO WHY
BELL ALLSN LINE CRACKED 09/20/2002
206B 250C20 68756320 FUEL SYSTEM CA021007004
(CAN) AIRCRAFT LANDED NORMAL SHUTDOWN. FUEL WAS NOTICED DRIPPING FROM ENGINE PAN DRAIN. BOOST PUMPS TURNED ON TO CHECK FOR STATIC LEAKS. FOUND SUBJECT LINE DRIPPING FUEL AROUND 'B' NUT. NUT WAS CHECKED AND WAS TIGHT. LINE WAS REMOVED AND INSPECTED AND A CRACK WAS FOUND. CRACK RUNS ABOUT 1/3 OF THE CIRCUMFERENCE OF THE STEEL TUBE AT THE BASE OF THE FLARE.

BELL	ALLSN		SHAFT	CORRODED	07/22/2002	
206L1	250C28B		23071311	ENGINE	2002FA0001147	

ON VISUAL INSPECTION OF SHAFT, FOUND EXCESSIVE PITTING ON INNER RACE AREA. EXCESSIVE CORROSION ON INNER RACE SURFACE. PROTECTIVE GREASE WAS ON SURFACE OF INNER RACE.

BELL	ALLSN	RROYCE	SEAL	DAMAGED	07/17/2002	
206L1	250C30	250C30P	895007	TURBINE SECTION	AUS20020972	

(AUS) ENGINE REMOVED DUE TO METAL CONTAMINATION. INVESTIGATION FOUND THE ROTATING POWER TURBINE LABYRINTH SEAL CONTACTED THE NO6 AND NO7 BEARING SUMP STATIONARY SEALS. WEAR PATTERN ON THE SEAL AREAS ARE OVAL SUGGESTING THAT THE ENGINE HAD BEEN SUBJECTED TO A HEAVY LANDING AT SOME TIME PREVIOUS.

BELL	ALLSN	LONGERON	CRACKED	09/07/2002	
206L3	250C30	206031314037	ROTORCRAFT TAIL	AUS20021040	

(AUS) TAIL BOOM LONGERON CRACKED AROUND TWO RIVET HOLES.

BELL		INDICATOR	FAILED	08/16/2002	592
407		407375001105	MGT	YT2R631356	

INDICATOR HAS FAILED (FALSE EXCEEDANCES THAT CANNOT BE CLEARED). WHEN LAPTOP IS CONNECTED GET AN ERROR SAYING THAT IP ADDRESS IN NOT CORRECT.

BELL		INDICATOR	FAILED	08/16/2002	592
407		407375002103	NG	YT2R631357	

REPLACED GAUGE, INDICATOR HAS FAILED (FALSE EXCEEDANCES) THAT CANNOT BE CLEARED. WHEN LAPTOP IS CONNECTED GET AN ERROR SAYING THAT IP ADDRESS IS NOT CORRECT.

BELL		DISPLAY	FAILED	04/01/2002	46
430		430375002107	COCKPIT	AC2A081089	

EHSI SCREEN FAILED TO ILLUMINATE REPLACED WITH SERVICEABLE EFIS TUBE.

BELL	ALLSN	SOLENOID	DEFECTIVE	04/01/2002	26
430	250C40B	430360055101	NR 1 ENGINE	AC2A081090	

SOLENOID IS DEFECTIVE. SNAP RING ON SHAFT UNDER THE SPRING DOES NOT STAY IN GROOVE. REPLACED SOLENOID.

BELL	LYC	LYC	CRANKSHAFT	CRACKED	09/18/2002	
47G5A	VO435B1A	VO435B1A	72469	RECIPROCATING	AUS20021053	1050

(AUS) CRANKSHAFT CRACKED. CRACK RAN THROUGH THE OIL GALLERY, ACROSS THE THRUST FACE AND THROUGH THE OPPOSITE OIL GALLERY. CRACK EXTENDS THROUGH ALMOST 60% OF THE CIRCUMFERENCE OF BEARING JOURNAL SURFACE.

BOLKMS	LYC	GARRTT	ROTOR	DAMAGED	09/11/2002	
BK117B1	LTS101750B1	410102080	410100639	TURBINE ENGINE C	AUS20021076	

(AUS) NO2 ENGINE COMPRESSOR AXIAL ROTOR DAMAGED BEYOND LIMITS. SUSPECT CAUSED BY FOD.

CESSNA	LYC		ADAPTER	MISSING	09/23/2002	392
150H	O360A4A		LW15416	MAGNETO	2002FA0001187	

PULLED THE MAGNETOS FOR INSPECTION, AND FOUND THAT THE RT MAGNETO DRIVE ADAPTER HAS SOME DAMAGED BEARINGS. PULLED THE DRIVE ADAPTER, AND FOUND THAT PIECES OF THE BEARING CAGE WERE MISSING, AND THE BEARINGS WEREN'T SPACED PROPERLY. PULLED THE OIL FILTER, SCREEN, AND OIL SUMP IAW, AND FOUND 6 PIECES OF STEEL. REASSEMBLED THE ENGINE, AND RETURNED TO SERVICE. INFORMATION FROM THE MAGNETO DRIVE ADAPTER ASSEMBLY WERE AS FOLLOWS.

CESSNA	LYC	WIRE ROPE	BROKEN	08/02/2002	
172D	O360A1A	33924925	TIE RODS	CA020916005	

(CAN) ON TAKEOFF RUN, AT APPROXIMATELY 2 FT OFF THE WATER, A/C SETTLED BACK DOWN DUE TO UNSTABLE AIR. A NOISE WAS HEARD AND THE A/C BECAME VERY UNSTABLE. ABORTED TAKEOFF. AS THE A/C SLOWED DOWN & THE LIFT DISSIPATED, THE LT WING SUDDENLY DIPPED DOWN AND CAME IN CONTACT WITH THE WATER CAUSING THE A/C TO VEIR LT ABRUPTLY, DISPLACING A CONSIDERABLE AMOUNT OF WATER, BUT MANAGE TO KEEP THE A/C FROM INVERTING. CAUSED ALL THE FITTING ON THE END OF THE FLOAT STRUTS TO FAIL. THE FINAL RESTING POSITION OF THE A/C WAS ENGINE POINTING UP, TAIL AND LT WING TIP PARTIALLY SUBMERGE. THE A/C WAS TOWED AND BEACHED. UPON INSPECTION, IT WAS FOUND THAT BOTH CROSS WIRES WERE BROKEN ALLOWING THE WING TO GO DOWN.

CESSNA	LYC		MOUNT	CRACKED	09/27/2002	10834
172L	O320E2D		05510171	ENGINE	CA021010003	

(CAN) ENGINE MOUNT ASSEMBLY CRACKED AT LOWER CROSS MEMBER RT SIDE.

CESSNA	LYC	PRECISION	FLOAT	DAMAGED	09/20/2002	
172P	O320D2J			CARBURETOR	2002FA0001124	

CARBURETOR SEAT IN FOR REPAIR BECAUSE IT WAS LEAKING. AFTER DISASSEMBLY ONE PONTOON OF (AP) FLOAT WAS FILLED WITH FUEL. OPPOSITE PONTOON HAD MARK FROM RUBBING HOUSING.

CESSNA	LYC	ENGINE	MALFUNCTIONED	10/01/2002	
172R	IO360C1A		NACELLE	2002FA0001173	

ENGINE SHUT DOWN IN FLIGHT. ABLE TO RESTART ON GROUND RUNUP INDICATES NO PROBLEMS. REMOVED FUEL SERVO FOR BACK/FLOW CHECK FOUND OIL IN SERVO NOT DETERMINED IF CAUSE OF SHUTDOWN. FLOW DIVIDER OVERHAULED. IGNITION SWITCH DISASSEMBLED/ REPAIRED. FUEL VENT SYSTEM CHECKED, OK. CAUSE OF SHUTDOWN UNKNOWN. NOT ABLE TO DUPLICATE.

CESSNA		BULKHEAD	CRACKED	10/14/2002	82
172S		055032111	SPINNER	2002FA0001183	34

FOUND AFT PROPELLER SPINNER BULKHEAD CRACKED AT ONE FLANGE AT PROPELLER BLADE CUT OUT. EDGE WITH NUTPLATE AND SCREW STILL ATTACHED TO PROPELLER SPINNER. CESSNA SERVICE BULLETIN SB02-61-01 WAS ACCOMPLISHED 34.0 HOURS PREVIOUSLY AND THE AFT SPINNER BULKHEAD REPLACED AT 82.2 HOURS WITH. THIS IS AN ONGOING PROBLEM AND HAS NOT BEEN RESOLVED WITH THE NEW -11 BULKHEAD NOR CESSNA SERVICE BULLETIN SB02-61-01.

CESSNA		TRANSMITTER	FAILED	10/22/2002	1893
172S		S33311	RT FUEL TANK	2002FA0001199	

RT FUEL QUANTITY WENT TO "0" IN FLIGHT, AIRCRAFT RETURNED TO HOME STATION. MAINTENANCE FOUND FUEL QUANTITY TRANSMITTER FLOAT SEPARATED FROM THE TRANSMITTER. THE FLOAT ATTACH ARM BROKE OUTBOARD OF THE FLOAT WHERE IT WAS CRIMPED AND THE END PIECE, WASHER AND FLOAT SEPARATED. THE PIECES WERE FOUND INSIDE THE FUEL CELL. REPLACED THE TRANSMITTER, RESEALED THE TANK ACCESS COVER, RESEVICED, RECALIBRATED AND LEAK CHECKED SATISFACTORY.

CESSNA	LYC	SELECTOR	MISINSTALLED	10/23/2002	2319
177RG	IO360A1B6	8857K44	MLG	2002FA0001204	

PILOT INADVERTENTLY BUMPED MLG SWITCH ON SHORT FINAL WHILE MOVING THE TRIM WHEEL, CAUSING A GEAR-UP LANDING. THE SAFETY FAILED TO WORK ON MLG SWITCH. UPON INVESTIGATION FOUND THAT THE SWITCH KNOB WHEN SCREWED COMPLETELY ONTO SWITCH CAUSED THE SPRING LOADED SAFETY TO COME OFF THE SWITCH. THIS CAUSED THE SAFETY NOT TO WORK AND MADE IT EASY TO MOVE THE SWITCH WITHOUT PULLING OUT ON THE KNOB TO MOVE SWITCH INTO THE UP POSITION OR DOWN POSITION. INSTALLED A NEW SWITCH AND KNOB AND CHECKED THE OPERATION AND WAS FOUND TO WORK PROPERLY.

CESSNA LYC SPAR CORRODED 10/11/2002 3040
177RG IO360A1B6 17107036 WING 2002FA0001219
OBSERVED THE CARRY THRU SPAR CORROSION WHEN LOOKING AT THE AIRCRAFT. THIS ITEM HAD SURFACE CORROSION THAT HAS BLISTERING THAT COULD BE PICKED AT AND MOST OF THE SURFACE AREA HAD WHITE DUSTING AND DISCOLORATION INDICATING CORROSION THAT REQUIRES TREATMENT. CAUSE IS PROBABLY FROM EXPOSURE TO OUTSIDE STORAGE.
CESSNA CONT CESSNA O-RING LEAKING 09/13/2002 3708
210E IO520* AN6227B9 ACTUATOR 2002FA0001115
AIRCRAFT LANDED WITH MAIN LANDING GEAR UP AND NOSE GEAR DOWN. CAUSE OF INCIDENT WAS A FAILED ORING IN NOSE LANDING GEAR ACTUATOR. LEAK RATE DEPLETED RESERVOIR AND WAS TOO GREAT FOR HAND PUMP VOLUME. MM HAS NO REPLACEMENT SCHEDULE FOR THESE ORINGS.
CESSNA CONT SADDLE CRACKED 09/14/2002 2441
210E IO520* 12414231 MLG 2002FA0001125
BOTH MLG SADDLES WERE FOUND TO BE CRACKED IAW AD. PREVIOUS INSPECTION WAS 132 HOURS BEFORE THIS INSPECTION.
CESSNA CONT ACTUATOR CRACKED 09/08/2002
210K IO520L 12810061 LANDING GEAR AUS20021036 1367
(AUS) LH MAIN LANDING GEAR COULD NOT BE EXTENDED. THE FAULT WAS TRACED TO A BROKEN ACTUATOR PISTON/RACK. BREAK OCCURRED IN THE RACK AREA TWO TEETH IN FROM THE END AND ORIGINATING AT THE BASE OF THE SECOND TOOTH. THE CRACK FACE SHOWS EVIDENCE OF BEACH MARKS' INDICATING A FATIGUE FAILURE. SMOKE WAS ALSO REPORTED IN THE COCKPIT PRIOR TO LANDING FOLLOWING ATTEMPTS TO EXTEND GEAR. REASON STILL TO BE ESTABLISHED.
CESSNA CONT TORQUE TUBE CRACKED 08/27/2002
310R IO550* 504501032 MLG AUS20020970
(AUS) RT MAIN LANDING GEAR TORQUE TUBE CRACKED IN WELDED AREA AROUND THE FORK BOLT. TORQUE TUBE INTERNALLY CORRODED.
CESSNA CONT DOWNLOCK BROKEN 09/15/2002
337F IO360C S20881 MLG CA021004007
(CAN) ONE WIRE THAT ATTACHES TO THE LT MLG DOWNLOCK SWITCH FRACTURED CAUSING NO 'GREEN' DOWN GEAR LIGHT TO ILLUMINATE AFTER GEAR WAS SELECTED DOWN. THE WIRES THAT ATTACH TO THE SWITCH ARE PERMANENTLY MOLDED AND APPROXIMATELY 18 GAUGE WHICH ARE QUITE THIN FOR THE APPLICATION.
CESSNA CONT BELLCRANK BROKEN 09/26/2002
340A TSIO520* 504100112 RT MLG WHEEL 2002FA0001170
RIGHT MAIN LANDING GEAR COLLAPSED ON ROLLOUT AFTER TOUCHDOWN. INITIAL INSPECTION REVEALED OUTBOARD MAIN LANDING GEAR RETRACTION LINK (PN 504100112) SEPARATED FROM RIGHT MAIN LANDING GEAR STRUT AT ITS TWO ATTACH POINTS. BOTH BREAKS APPEAR TO BE INSTANTANEOUS AND UPPER STRUT ATTACH LUG AND BOLT WERE SHEARED. NO OBVIOUS CAUSE FOR THE BREAKS WERE APPARENT.
CESSNA ESCAPE HATCH SEPARATED 08/16/2002 12782
402B 52111302 FUSELAGE 081620027947Q
BETWEEN SLC & TWF PILOT REPORTED A LOUD BOOMING/STRIKING NOISE, AS IF HE HAD HIT A BIRD. UPON INVESTIGATION HE NOTICED THE ESCAPE HATCH WAS MISSING. HE NOTIFIED SALT LAKE CENTER OF THE SITUATION. NO OTHER DAMAGE WAS NOTICED. THE PILOT SLOWED THE AIRCRAFT AND CONTINUED SAFELY TO TWF.
CESSNA CONT SPAR CAP CORRODED 09/06/2002
402C TSIO520VB 512204123 WING SPAR AUS20020995 14201
(AUS) LH WING LOWER REAR SPAR CAP CORRODED IN AREA BETWEEN THE VERTICAL FLANGE AND THE SPAR WEB. CORRODED AREA IS LOCATED FORWARD OF THE AILERON FROM WS 206 TO WS 229.
CESSNA CONT SKIN CORRODED 09/06/2002
402C TSIO520VB 512201120 WING, PLATES/SKI AUS20020996 14201
(AUS) RH WING LOWER SKIN CONTAINED THREE CORROSION HOLES INTO THE TANK. AFT STRINGER CONTAINED EXFOLIATION CORROSION IN THE SAME LOCATION AS ONE OF THE HOLES.
CESSNA CONT STRUCTURE BROKEN 09/11/2002 5800
414 TSIO520* 50340091 ELEVATOR TAB 2002FA0001142
DURING 100 HOUR INSPECTION, ELEVATOR TRIM BEARINGS WERE SUSPECTED TO BE LOOSE AND REQUIRE REPLACEMENT. TO REPLACE THESE BEARINGS, ELEVATOR TRIM TAB HORN WAS REMOVED. WHEN FORCE WAS APPLIED TO TWO OF FOUR ATTACHING NUTS TO EFFECT THEIR REMOVAL FROM THE MATING SCREW, THEY SEPARATED, BROKE OFF INSIDE OF TRIM TAB. WHEN FULL REMOVAL OF TWO OF SCREWS WAS EFFECTED IT WAS NOTED THAT ONE HAD RUST CORRODED OVER 90 PERCENT OF ORIGINAL DIAMETER AND SECOND SCREW HAD A FULL 100 PERCENT LOSS. ONLY ATTACHMENT OF THESE SCREWS WERE FROM THE COATING OF PAINT APPLICATION.
CESSNA CONT SPARK PLUG FOULED 10/02/2002 125
421C GTSIO520* RHB32E ENGINE 2002FA0001159
ROUGH MAGNETO ON RT ENGINE DURING RUN UP. PULLED SPARK PLUGS ON LT MAGNETO SIDE. FOUND ONE SPARK PLUG SHORTED OUT (OUTSIDE ELECTRODE TOUCHING CENTER ELECTRODE). WHEN THE OUTER ELECTRODES WERE TOUCHED THEY WERE FOUND TO BE VERY LOOSE AND FLOATING. SUSPECT THAT SPARK PLUG WAS MANUFACTURED POORLY.
CESSNA PWA BUSHING CORRODED 09/30/2002
550 JT15D4 664130667 MLG CA021001007
(CAN) DURING PHASE 5 INSPECTION CORROSION WAS NOTICED AROUND THE TRUNNION INNER PINS. AFTER MUCH DIFFICULTY THE PINS WERE REMOVED AND CORROSION WAS FOUND ON THE INSIDE OF THE BUSHINGS, SEIZING THE PINS. THE PINS ARE STACKED TO THE TRUNNION AND BUSHING WITH ROLL PINS. THE GEAR IS REQUIRED TO BE REMOVED AT 25800 LANDINGS, BUT, THERE IS NO REQUIREMENT TO REMOVE AND INSPECT THE PINS.
CESSNA PWA PANEL CORRODED 09/30/2002
550 JT15D4 65210008 STUB WING CA021001008
(CAN) FWD OUTBOARD CORNER OF BONDED DOUBLER. PANEL WAS BEING REPLACED DO TO OIL CANNING FROM DATE OF MANUFACTURE WHEN THE CORROSION WAS FOUND AT THE FWD OUTBOARD CORNER WHERE THE PANEL CONTACTS A MONEL DOUBLER SPLICE PLATE. THIS IS NOT AN AREA THAT CAN BE INSPECTED UNLESS THE PANEL IS REMOVED OR UNTIL THE CORROSION MIGRATES BEYOND THE MONEL DOUBLER.
CESSNA PWA CESSNA BULKHEAD WORN 09/30/2002
550 JT15D4 641201534 FUSELAGE CA021002001
(CAN) WHERE THE ELEVATOR TRIM CABLES PASS THROUGH THE CANTED BULKHEAD, THE RT CABLE WAS FOUND WEARING INTO THE LOWER CORNER OF THE HOLE & THE LT CABLE WAS JUST CLEAR BY ABOUT .020 INCH.
CESSNA PWA STARTER GEN INOPERATIVE 10/16/2002 950
560CESSNA JT15D5 300SGL129Q RIGHT 2002FA0001218
GENERATOR DROPPED OFF LINE DURING FLIGHT AND WAS ABLE TO BE RESET. AFTER LOADS WERE SHED. AFTER LANDING AND SHUTDOWN STARTER WOULD NOT ROTATE FOR NEXT START. REPLACED RIGHT STARTER GENERATOR.
CHECKED OK.

CESSNA CONT FILTER CONTAMINATED 07/30/2002
A188B IO520D 7560097 FUEL SYSTEM 2002FA0001114
THE FUEL FILTER SUFFERED CONTAMINATION TO THE POINT OF ENGINE LEANING, REDUCING POWER TO LOW TO MAINTAIN FLIGHT WHILE IN AERIAL APPLICATION WORK. THE ALTITUDE WAS APPROXIMATELY .5000 FT AGL THE SPEED OVER THE CROP WAS 115 MPH. REPOSITIONING THE FUEL FILTER STRAINER DRAIN SO ONE COULD SEE THE CONDITION OF THE FUEL BEING DRAINED WOULD UNDOUBTEDLY HELP TO DETERMINE IF CONTAMINATION IS PRESENT IF AT ALL IN THE FUEL.
CESSNA FITTING CRACKED 10/09/2002 9500
TR182 22411001 MLG 2002FA0001165
MLG AXLE ATTACHMENT FITTING, FOUND CRACKED AT TOP OUTBOARD EDGE. CRACK IS VISIBLE WITHOUT ADDITIONAL AIDS. CRACK ORIGINATES AT THIN EDGE WHERE FITTING WAS MACHINED DURING MANUFACTURE. CRACK IS ALSO IN ALIGNMENT WITH FORGING LINE.
CIRRUS FITTING LOOSE 09/25/2002 141
SR22 10332002 AILERON HINGE 2002FA0001117
DURING INSPECTION FOUND LT INBOARD AILERON HINGE LOOSE. CONDITION FOUND BY FEELING A CLUNK WHILE MOVING TRAILING EDGE OF AILERON UP AND DOWN SLOWLY. TRAILING EDGE OF AILERON HINGE ABLE TO BE MOVED 1/8" UP AND DOWN. FOUND EVIDENCE OF "TORQUE-SEAL" ON ATTACH BOLT NUTS AND THREADS. CONTINUED MOVEMENT OF AILERON HINGE COULD POTENTIALLY DAMAGE ATTACH HARDWARE AND CAUSE SEPARATION OF AILERON FROM WING.
CIRRUS GROMMET DEFORMED 09/25/2002 141
SR22 10209001 MLG 2002FA0001111
DURING A SCHEDULED INSPECTION FOUND BOTH MAIN GEAR LEG ATTACH BRACKET GROMMETS SEVERELY CRACKED AROUND FLANGES AND DISTORTED. HAVE FOUND SIMILAR CONDITION ON SEVERAL CIRRUS SR20 AND SR22 AIRCRAFT WITH TOTAL TIME IN SERVICE AS LOW AS 105 HOURS. TOTAL FAILURE OF THE GROMMET WILL RESULT IN DAMAGE TO THE LAMINATED MAIN GEAR LEG THAT WILL RENDER IT UNSERVICEABLE. SUGGEST CLOSE ATTENTION TO THESE PARTS DURING SCHEDULED INSPECTIONS AND AFTER HARD LANDINGS.
HUGHES LYC BUMPER BLOCK MISSING 08/09/2002
269C1 HIO360C1A 77416 ENGINE 2002FA0001149
DURING A SCHEDULED INSPECTION, THE LOWER PULLEY DRIVESHAFT WAS FOUND TO HAVE AN ABNORMAL AMOUNT OF MOVEMENT. UPON REMOVING THE SHAFT, THE CRANKSHAFT BUMPER BLOCK WAS FOUND TO BE MISSING. IT SHOULD BE NOTED THAT THIS PART IS NOT IN EITHER THE AIRFRAME OR THE ENGINE MANUFACTURERS PUBLICATIONS. THERE IS NO STEP TO INSTALL OR INSPECT FOR INSTALLATION OF THIS BUMPER IN THE ENGINE INSTALLATION PROCEDURES.
HUGHES BEARING LOOSE 07/17/2002
369D 369D2172121 TAIL ROTOR 2002FA0001179
AIRCRAFT WAS EXPERIENCING INCREASED TAIL ROTOR VIBRATIONS IN THE TAIL ROTOR FORK, UPON REMOVAL, ONE BEARING POPPED OUT. IT APPEARS THAT IT HAD ALREADY BEEN LOOSE AND ROTATING WITHIN THE FORK.
LEAR GARRTT SEAL CRACKED 09/27/2002 17135
35LEAR TFE73122B 3001241 BLEED AIR DUCT CA020930001
(CAN) LT BLEED AIR WARNING CAME ON AT FLIGHT LEVEL 41000. BLEED AIR SHUT-OFF & SWITCH SELECTED IN THE OFF POSITION LIGHT EXTINGUISHED. FOUND LEFT HAND PYLON BLEED AIR DUCT SEALS DRIED AND CRACKED.
LEAR SWITCH FAILED 07/29/2002
36A E45C47 CABIN PRESSURE 2002FA0000969
ANEROID SWITCH FAILED SPECIFIC PRESSURE LIMITS.
LUSCOM CONT SPAR CORRODED 09/29/2002
8A A65* LT & RT WINGS 2002FA0001174
INTERGRANULAR CORROSION, FOUND IN THE FOLLOWING WING COMPONENTS DURING A REPAIR/REBUILD PROCESS. LT AND RT MAIN SPAR BEAMS, REAR, LEFT MAIN SPAR BEAM, FRONT.
MOONEY LYC LINE FAILED 09/21/2002
M20C O360A1D 76617 ENG OIL 2002FA0001157
DURING FLT, SHORTLY AFTER DEPARTURE FROM LAF, IN CRUISE AT 3,000 FT, PILOT HEARD A POP FROM THE ENGINE. SMOKE FROM FRONT COWLING, AND IN THE COCKPIT. CONTACTED TOWER TO ADVISE OF SITUATION AND BEGAN 180 DEGREE TURN TO RETURN TO LAF. HEARD TWO MORE POPS FROM ENGINE AND BEGAN LOSING POWER. COULD NOT MAINTAIN ALTITUDE. ADVISED TOWER OF PUTTING AIRCRAFT DOWN IN A FIELD. AIRCRAFT LANDED IN FIELD APPROXIMATELY 12 MILES NW OF LAF. NO DAMAGE TO AIRCRAFT DURING THE EMERGENCY LANDING. INSPECTION OF THE AIRCRAFT REVEALED THE PROP GOVERNOR EXTERNAL OIL LINE FRACTURED AT THE B-NUT CAUSING LOSS OF OIL. THE NR 2 CYLINDER AFT PUSH ROD FAILED DUE TO LACK OF OIL AND CREATED A HOLE IN THE ENGINE CASE.
MOONEY LYC LYC BEARING FAILED 07/26/2002
M20F IO360A1A IO360A1A UK RECIPROCATING AUS20021005
(AUS) ENGINE OIL FILTERS CONTAMINATED WITH METAL. SUSPECT CAUSED BY FAILURE OF EITHER MAIN BEARING OR BIG END BEARING.
MOONEY LYC BENDIX DISTRIBUTOR CRACKED 10/01/2002
M20J IO360A3B6 ES10682054 MAGNETO 2002FA0001193
DISTRIBUTOR GEAR TOOTH DAMAGE. SEVERAL GEAR TEETH BROKEN ON BOTH GEARS. NEW GEARS WERE FOUND TO BIND ON ROTOR PINION GEAR EVERY 90 DEGREES. NO ROTOR TO HOUSING INTERFERENCE INDICATED. VISUAL INSPECTION REVEALED NO CRACKS OTHER THAN ACCEPTABLE STRESS CRACK AT BEARING BORE IN BLOCK. GEAR AXLE BUSHINGS APPEAR SECURE, MAY BE MISALIGNED FROM WARPAGE OR MANUFACTURE DEFECT. SCREW THREAD INSERTS FOR CONTACT ASSY. PULL OUT BEFORE REACHING MINIMUM TORQUE. BLOCK HAS A 94 DATE CODE. REPLACED BLOCK, MAGNETO FUNCTIONS PROPERLY.
MOONEY CONT UNIVERSAL INOPERATIVE 09/09/2002
M20K TSIO360* 740009007 PITCH TRIM 2002FA0001209
DURING INVESTIGATION OF AUTO PILOT PITCH OSOLATIONS. FOUND UNIVERSAL JOINT AT PITCH TRIM JACK SCREW SQUARE DRIVE ISSUING ONE OF THE FOUR STAKED IN ROLL PINS.
MOONEY CONT CLAMP WORN 10/12/2002 320
M20R IO550G 660017003 THROTTLE BODY 2002FA0001180
OWNER COMPLAINED THAT HE WAS UNABLE TO CLOSE THROTTLE TO LAND. THE MIXTURE HAD TO BE MOVED TO CUT-OFF TO LAND. INVESTIGATION REVEALED THAT THE THROTTLE CABLE HOUSING WAS MOVING IN THE CLAMP LOCATED AT THE THROTTLE BODY PREVENTING THE THROTTLE FROM CLOSING ALL THE WAY. THE CLAMP HALVES WERE WORN INTERNALLY TO THE POINT THAT THEY NO LONGER WERE TIGHT. THE INTERNAL RIDGE IN THE CLAMP HALVES THAT CONTACTS A GROOVE IN THE THROTTLE CABLE HOUSING WAS WORN AWAY. THE WEAR APPEARS TO HAVE BEEN CAUSED BY VIBRATION. THE CLAMP IS MADE OF ALUMINUM. IT WOULD SEEM THAT A HARDER MATERIAL WOULD BE APPROPRIATE. AT THE SAME TIME THE MIXTURE CABLE CLAMP WAS FOUND WORN AND CLOSE TO FAILURE. THIS IS THE SAME CLAMP USED ON
PILATS PWA RELAY FAILED 09/23/2002
PC1245 PT6A67B 9742001212 HORIZONTAL STAB CA021003004
(CAN) FLIGHT CREW EXPERIENCED UNCOMMANDED UP TRIM ON HORIZONTAL STAB TRIM. SYSTEM WAS DEACTIVATED USING TRIM INTERRUPT SWITCH, AND AIRCRAFT LANDED USING ACT. STAB TRIM. ON INVESTIGATION FAULTY RELAY FOUND (K22) RELAY REPLACED AND SYSTEM TESTED.

PIPER GARRTT LINE CHAFED 10/24/2002 6830
PA23 TFE7313R1D 30726361 LEFT ENGINE JV2R200200001
REPORTED OIL LEAK, REMOVED COWLING TO INSPECT FOR OIL LEAK, REMOVED CLAMP AND INSPECTED TO FIND THE CLAMP HAD CHAFED THE LINE WHICH CAUSED AN OIL LEAK. THE TEFLON ON THE CLAMP WAS WORN CAUSING METAL TO METAL CONTACT. INSPECTING THE LINE AT THE CHAFED AREA AND USING THUMB NAIL, A HOLE WAS CREATED.
PIPER LYC CARBURETOR INOPERATIVE 09/09/2002 4000
PA28151 O320E3D MA4SPA ENGINE 2002FA0001130
(CARBURETOR) AN ALUMINUM SLIVER, .188 LONG, .018 THICK, .023 WIDE WAS FOUND BETWEEN THE NEEDLE VALVE AND SEAT. PREVENTING OPERATION OF NEEDLE VALVE. THE SLIVER APPEARS OF THE THROTTLE BODY ASSEMBLY, WHERE THE FUEL INLET AND STRAINER ASSEMBLY IS INSTALLED.
PIPER LYC BOLT SHEARED 09/05/2002 12250
PA28161 O320* LT MLG 2002FA0001131
LT GEAR ASSEMBLY SHEARED UPPER AND LOWER RETAINING BOLTS. UPON LANDING, AIRCRAFT USED FOR STUDENT TRAINING AND HAS OVER 12200.0 HOLES, SUSPECT HARD LANDINGS WAS CAUSE. REPLACE BOLTS AND INSPECT MOUNTING AREA AT 5000 HOURS.
PIPER LYC FITTING BROKEN 09/05/2002
PA28R180 IO360B1E 6703102 LANDING GEAR AUS20021047
(AUS) LH MAIN LANDING GEAR FITTING BROKE INTO FOUR PIECES DURING FLIGHT AND LANDING GEAR FELL FREE BUT DID NOT LOCK. DURING INVESTIGATION THE SAME PART WAS REMOVED FROM THE RH MAIN LANDING GEAR (PNO 67031-03) AND WAS ALSO FOUND TO BE BADLY CRACKED.
PIPER LYC TRUNNION FAILED 09/01/2002
PA28R201 IO360C1C6 6705403 NOSE/TAIL LANDIN AUS20020984
(AUS) NOSE LANDING GEAR TRUNNION ATTACHMENT LUG FOR THE EXTENSION SPRING FAILED. NOSE LANDING GEAR COLLAPSED DURING LANDING.
PIPER LYC SPAR CAP CORRODED 09/02/2002
PA30 IO320C1A 2355100 WING SPAR AUS20021019 5926
(AUS) LH AND RH WING LOWER FORWARD SPAR CAPS CONTAINED SEVERE EXFOLIATION CORROSION IN AREA LOCATED AT WS 62 DUE TO ENGINE EXHAUST GASSES. AT LEAST 10% OF THE SPAR CAP MATERIAL IS AFFECTED BUT CAN ONLY BE SEEN WITH THE FUEL TANK BAYS REMOVED.
PIPER LYC LYC PLUG MISSING 09/13/2002
PA31 TIO540A2B TIO540A2B RECIPROCATING AUS20021062
(AUS) ENGINE OIL PRESSURE DROPPING INTERMITTENTLY. INTERNAL INSPECTION FOUND THE INTERNAL SUMP OIL PICKUP GALLERY PLUG MISSING. SUSPECT THE PLUG WAS NOT INSTALLED DURING ENGINE OVERHAUL.
PIPER LYC LYC CRANKCASE CRACKED 09/24/2002
PA31 TIO540A2B TIO540A2B L224361 RECIPROCATING AUS20021063
(AUS) ENGINE CRANKCASE CRACKED ON LH SIDE ADJACENT TO THE FRONT CYLINDER. THIS DEFECT IS LINKED WITH MDR 02/1062 (MISSING OIL PLUG).
PIPER LYC BENDIX FCU OUT OF ADJUST 03/09/2002
PA31 TIO540A2B RSA10ED1 252416315 FUEL AUS20021068 25
(AUS) ENGINE FUEL CONTROL UNIT OUT OF ADJUSTMENT.
PIPER LYC LYC PISTON RING BROKEN 08/14/2002
PA31 TIO540A2C TIO540A2C SL73857 RECIPROCATING AUS20020971
(AUS) NO6 CYLINDER OIL CONTROL PISTON RING BROKEN. BROKEN RING INGESTED BY OIL PUMP.
PIPER LYC STRUCTURE CRACKED 08/26/2002 14253
PA31 TIO540A2C MLG DOOR CA021002011
(CAN) LT OUTBOARD GEAR DOOR HAD A SMALL CRACK FRONT AND BACK OVER THE HINGE TO THE GEAR LEG. RT OUTBOARD GEAR DOOR HAD A SMALL CRACK FRONT OVER THE HINGE TO THE GEAR LEG.
PIPER LYC RIB CRACKED 08/26/2002 14253
PA31 TIO540A2C 4040522 MLG DOOR CA021002012
(CAN) ON INSPECTION IT WAS NOTICED THAT WHERE THE OUTBOARD DOOR HINGE ATTACH TO THE OUTBOARD RIB, THE RIB WAS CRACKED. THE RIB WAS REPAIRED AND DOOR REINSTALLED. IF LEFT LONGER THE DOOR COULD HAVE JAM IN THE WHEEL WELL.
PIPER LYC SKIN CRACKED 08/26/2002 14253
PA31 TIO540A2C 4472303 RT WING CA021002013
(CAN) ON INSPECTION IT WAS NOTICED THAT WHERE THE RT MAIN GEAR PUSHES TO THE UP POSITION, THE RIB HOLDING THE WHEEL STOP WAS CRACKED AND THE WING SKIN HOLDING THE RIB WAS ALSO CRACKED FROM THE MANY CYCLES.
PIPER LYC OZONE SPRING BROKEN 04/22/2002
PA31 TIO540A2C O14529243 756265 DOOR ACTUATOR CA021002014
(CAN) INBOARD GEAR DOOR OPENED IN FLIGHT AND AFTER LANDING WHEN MASTER WAS CLOSE OFF. THE DOOR CAME OPEN. THE SPRING IN THE DOOR ACTUATOR THAT PUSHES THE BALL LOCK WAS FOUND BROKEN.
PIPER LYC SKIN CRACKED 09/30/2002
PA31 TIO540J2BD 4015514 HORIZONTAL STAB CA021007003
(CAN) LEFT HORIZONTAL STABILIZER LEADING EDGE SKIN CRACKED APPROXIMATELY 13 INCHES.
PIPER LYC INTAKE VALVE BROKEN 09/16/2002 577
PA31350 TIO540J2BD CYLINDER 2002FA0001116
INTAKE VALVE BROKEN AT CLIP END, UNDER CRUISE POWER, VALVE REMAINED IN CYLINDER.
PIPER LYC PIPER DOUBLER CRACKED 09/16/2002
PA31350 TIO540J2BD 4020023 315359 AILERONS AUS20021050
(AUS) RH AILERON SPAR DOUBLER CRACKED IN AREA LOCATED IMMEDIATELY BELOW THE INBOARD HINGE ATTACHMENT PLATE LOWER BOLT HOLE. CRACK LENGTH18MM (0.71IN). FOUND DURING DYE PENETRANT INSPECTION IAWAD/PA31/118 AMDT 1.
PIPER PWA PIPER CLAMP LOOSE 09/01/2002
PA31T PT6A28 8124402 554901 AIR DISTRIBUTION CA020919001
(CAN) DURING DESCENT, THE AIRCRAFT DEPRESSURIZED. UPON INSPECTION, THE FORWARD CLAMP ON THE FRESH AIR TUBE WAS FOUND LOOSE AND THE TUBE WAS DISCONNECTED. THE FIBERGLASS ON THE EVAPORATOR BOX WAS THEN REINFORCED AND THE CLAMP REINSTALLED.
PIPER LYC DOUBLER CRACKED 09/06/2002
PA32RT300 IO540K1G5 6206105 WING, PLATES/SKI AUS20020997
(AUS) WING WALK SKIN CORRUGATED DOUBLER CRACKED IN AREA NEAR RIB AT STN36.9.
PIPER LYC RIB CRACKED 09/06/2002
PA32RT300 IO540K1G5 3821800 WING, RIB/BULKHE AUS20020998
(AUS) RH WING RIB CRACKED ALONG RIVET LINE IN THREE PLACES.

PIPER	LYC	LYC	CRANKSHAFT	CRACKED	09/06/2002	
PA32RT300T	TIO540S1AD	TIO540S1AD	13F17785	RECIPROCATING	AUS20021018	1635

(AUS) CRANKSHAFT CRACKED IN FORWARD RADIUS OF NO4 MAIN BEARING JOURNAL. FOUND DURING MAGNETIC PARTICLE INSPECTION. ENGINE HAD A BULKSTRIP CARRIED OUT AT 86.2 HOURS DUE TO PROPELLER STRIKE.

PIPER	LYC	RIB	DAMAGED	09/13/2002	
PA34200	IO360C1E6	7847502	NACELLE	CA021007014	

(CAN) PILOT ON A RETURN FLIGHT HOME EXPERIENCED A SLOWER THAN NORMAL LANDING GEAR RETRACTION. A VISUAL INSPECTION WAS CARRIED OUT. INSPECTION OF THE LEFT MAIN GEAR AREA REVEALED TWO RIB ASSEMBLIES DAMAGED. THEY WERE LOCATED ADJACENT TO EACH SIDE OF THE GEAR LEG, AT STATION 49.25 AND 69.24. THE AIRCRAFT WAS REMOVED FROM SERVICE. DURING THE GEAR REMOVAL, THE SUPPORT FITTING (AFT) WAS FOUND CRACKED AT THE LOWER OUTBOARD BOLT HOLE. PART NUMBER FOR THE RIB ASSEMBLIES WERE 78475-04 AND 78500-02. SUPPORT FITTING NUMBER WAS 67042-012. AIRCRAFT AIRFRAME HOURS WERE 7138.6. THE AIRCRAFT WAS TWO HOURS AWAY FROM A SCHEDULED 50 HOUR INSPECTION. THE RIB ASSEMBLIES AND SUPPORT FITTING REPLACEMENT WAS CARRIED OUT, AND LANDIN

PIPER	CONT	DRIVE SHAFT	FAILED	08/22/2002	1700
PA34200T	TSIO360EB	640926	OIL PUMP	2002FA0001153	

RT ENGINE LOST OIL PRESSURE AFTER TAKEOFF DISASSEMBLY REVEALED BROKEN OIL PUMP DRIVE SHAFT/GEAR. SHAFT IS THE WEAK LINK.

PIPER	CONT	DISTRIBUTOR	BURNED	09/25/2002	200
PA34220T	TSIO360*		MAGNETO	2002FA0001143	

DURING MAGNETO PERFORMANCE, CHECK PRIOR TO FLIGHT, PILOT NOTED ENGINE WANTED TO QUIT RUNNING WITH RIGHT MAGNETO SELECTED TO OFF. EXTERNAL INSPECTION OF MAGNETO LEFT CHECKED GOOD. REMOVED LEFT MAGNETO AND INSPECTED INTERNALLY. INSPECTION REVEALED .5000 INCH SECTION OF DISTRIBUTOR BLOCK BURNED AWAY. UNKNOWN CAUSE AND NO RECOMMENDATION AT THIS TIME.

PIPER	CONT	CONT	LINE	CHAFED	10/08/2002	553
PA34220T	TSIO360RB	TSIO360RB1B	6544453	ENGINE FUEL	3399	

FUEL INJECTION LINE TO NR 3 CYLINDER CHAFED BY CLAMP SECURING RUBBER INDUCTION COUPLING FROM INDUCTION SPIDER TO NR 5 CYLINDER INTAKE TUBE.

PIPER		SEAL	LEAKING	10/24/2002	49
PA44180			MLG ACTUATOR	2002FA0001211	

RIGHT MAIN GEAR ACTUATOR LEAKING AT SHAFT SEAL. ACTUATOR REPLACED. ACTUATOR PREVIOUSLY REPLACED AT 32.3 HOURS AFTT. THIS IS AN ONGOING PROBLEM WITH PIPER ACTUATOR. SO FAR ON A FLEET OF ONLY 7 PA-44 AIRCRAFT WE HAVE REPLACED 18 ACTUATORS SINCE AUGUST 2002. PIPER FACTORY HAS BEEN AWARE OF THE PROBLEM AND ARE WORKING WITH ON A NEW SEAL. WE FIND THE ACTUATOR SHAFTS HAVE BEEN LEFT WITH VERY SHARP EDGES ON THE OUTER END WHERE IT IS MACHINED. WE HAVE ALSO FOUND THE WITNESS HOLE FOR THE ROD END NOT CHAMFERED TO GET RID OF BURRS. THESE ARE TEARING UP THE SEALS. IT IS ALSO NOTED THAT THE SEALS SEEM TO BE VERY SOFT. AN ALTERNATE SEAL (O-RING) IS LISTED IN THE PARTS CATALOG.

PIPER		SPACER	MISSING	10/24/2002	160
PA44180		9506182 &83	CARB HEAT	2002FA0001210	

DURING LANDING ROLLOUT THE RIGHT ENGINE QUIT. ENGINE WAS RESTARTED AND RUNUP NORMAL EXCEPT FOR CARB HEAT OPERATION. MAINTENANCE FOUND BOTH LT & RT CARB HEAT CONTROLS NOT RIGGED RIGHT. MECHANIC OPENED CONSOLE AND FOUND THE SPACERS FOR BOTH CARB HEAT LEVERS HAD NOT BEEN INSTALLED AT THE FACTORY AND THIS ALLOWED THE CARB HEAT CONTROL LEVERS TO HANG UP ON THE CONSOLE FRAME

PIPER	LYC	VALVE SEAT	MISREPAIRED	09/27/2002	129
PA44180	LO360E1A6	72057	CYLINDER	2002FA0001152	

DURING ROUTINE COMPRESSION TEST FOUND NR 3 CYL COMPRESSION LOW. REMOVED CYLINDER AND FOUND THE INTAKE VALVE SEAT HAD BEEN INSTALLED AND GROUND CROOKED AT THE FACTORY. SEAT WAS REINSTALLED AND GROUND CORRECTLY AND CYL REINSTALLED ON ENGINE.

PIPER	LYC	VALVE SEAT	MISREPAIRED	09/27/2002	
PA44180	O360*	72057	ENGINE	2002FA0001154	

DURING ROUTING COMPRESSION TEST FOUND NR 4 CYLINDER COMPRESSION LOW. REMOVED CYLINDER AND FOUND THE INTAKE VALVE SEAT HAD BEEN INSTALLED AND GROUND CROOKED AT THE FACTORY. SEAT REINSTALLED AND GROUND CORRECTLY AND REINSTALLED ON THE ENGINE.

RAYTHN	GARRTT	PRESSURE	LEAKING	10/08/2002	428
HAWKER800XP	TFE731*	HE151854SN1	NR 2 HYD SYSTEM	2002FA0001186	

HYD FLUID SQUIRTING FROM UPPER PART OF PRESSURE SWITCH.

SKRSKY	TMECA	SEAL	LEAKING	10/13/2002	
S76A	ARRIEL1D	23063372	ENGINE	AC2A081172	

ENGINE STARTED LEAKING OIL AFTER OIL FLOW CHECK. REPLACED SEAL

SKRSKY	TMECA	SWIVEL	FRACTURED	09/10/2002	
S76C	ARRIEL1S	1945E81	LANDING GEAR	AUS20021038	

(AUS) LH UNDERCARRIAGE DOOR LINK SWIVEL BROKEN. INVESTIGATION FOUND THAT THERE WAS AN INDICATION OF A PRE-EXISTING CRACK IN THE RADIUS THROUGH APPROXIMATELY ONE THIRD OF THE DIAMETER.

SNIAS	TMECA	TMECA	IGNITER	UNSERVICEABLE	08/20/2002	
AS350BA	ARRIEL1B	ARRIEL1B	9550168760	SPARK PLUG/IGNIT	AUS20020974	

(AUS) ENGINE IGNITERS FAULTY. IGNITER IS MANUFACTURED BY EYQUEM.

SOCATA	LYC	ROD END	BROKEN	09/11/2002	
TB9	O320D2A	TB1017012000	RT AILERON	CA020917005	

(CAN) ON A SCHEDULED MAINTENANCE INSPECTION THE RT AILERON SWIVEL ROD END WAS FOUND STIFF. ON FURTHER INSPECTION THE BEARING RACE WAS FOUND BROKEN AND SOME OF THE BALL BEARINGS WERE MISSING.

SOCATA		SEAT BELT	FAILED	10/17/2002	1333
TBM700		T700A251000710	CABIN	2002FA0001198	

SEAT BELT BUCKLE CAME APART WITH A SIMPLE JERK TEST. WITH A STEADY PULL ON THE SEAT BELTS THE BELTS HOLD OK. ALL BELTS IN THE AIRCRAFT DID THE SAME THING. SEAT BELTS ARE MANUFACTURED BY ANJOU AERONAUTIQUE, THERE IS A SOCATA SERVICE LETTER SL70-027 THAT INFORMS USERS ABOUT POSSIBILITY OF REPLACEMENTS AND MENTIONS FRENCH AD 2002-104 & 2002-105, BUT DOES NOT INDICATE THE SERIOUSNESS OF THE PROBLEM. THE SUBMITTER BELIEVES THAT THIS IS A SERIOUS SAFETY ISSUE AS THEY HAVE FOUND ALL LIKE BELTS IN ANOTHER AIRCRAFT WILL FAIL TO HOLD IN THE SAME MANOR AND RECOMMENDS IMMEDIATE INSPECTION AND REPLACEMENT OF THE EFFECTED SEAT BELTS. THIS ORIGINALLY SUBMITTED TO GL-19 BY PAT BEATY @ IMAGE AIR, INC. (BNGR)

OMB No. 2120-0003

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

MALFUNCTION OR DEFECT REPORT

OPER. Control No.
ATA Code
1. A/C Reg. No. N-

Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER
2. **AIRCRAFT**			
3. **POWERPLANT**			
4. **PROPELLER**			

5. SPECIFIC PART *(of component)* CAUSING TROUBLE

Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.

6. APPLIANCE/COMPONENT *(Assembly that includes part)*

Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number

Part TT	Part TSO	Part Condition	7. Date Sub.

8. Comments *(Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)*

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Check a box below, if this report is related to an aircraft

☐ Accident; Date _____ ☐ Incident; Date _____

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